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ABSTRACT

An Australian study investigated the destinations of adult literacy students in nationally-funded programs, including their economic and employment patterns, educational development (maintenance of educational involvement and advancement, skill development), social well-being (family and personal development, life satisfaction, self-esteem), and community participation and enjoyment of community facilities. Data were collected over four years using a combination of survey and case study analysis and drawing on other research and policy information. Results indicate adult literacy education participants had diverse expectations and motivations, making evaluation of program impact inappropriate; literacy gains were only part of student motivation. Participants developed a noticeable shift in reading and cognitive problem- solving strategies, clearly moving away from dependence on tools and personal support. Literacy classes significantly improved employment opportunities, but inequities persisted. Sociability measures were initially higher while students were in the classroom, but this appeared a temporary effect. Retention rates differed for sample groups. Only a small proportion pursued further study, but overall, social and community participation increased. Functional and everyday literacy activities were substantially and positively altered for participants. Recommendations for program improvement are made. (Contains 49 references.) (MSE) (Adjunct ERIC Clearinghouse on Literacy Education)

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SKILLING ME SOFTLY

The Impact of Adult Literacy Classes

Patrick Griffin
John Pollock
Karen Corneille
Maree Fitzpatrick

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Final Report 1997

FL 801216

Commissioned by the

Department of Employment, Education, Training and Youth Affairs

Skilling Me Softly

A Longitudinal Study of the Destination of Adult Literacy Students

Funded by the Commonwealth Department of Employment, Education, Training and Youth Affairs

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The views expressed herein do not necessarily represent the views of
the Commonwealth Department of Employment, Education, Training and Youth Affairs.

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EXECUTIVE SUMMARY AND RECOMMENDATIONS

Introduction

The Department of Employment, Education, Training and Youth Affairs commissioned the study to investigate the destinations of adult literacy students engaged in classes funded by that department.

The main objectives of the study were to investigate

- Their economic and employment wellbeing (employment status and satisfaction, economic indicators);
- Their educational development (maintenance of educational involvement and advancement, skill development);
- Their social wellbeing (family and personal development - life satisfaction, self esteem);
- Their community wellbeing (participation and enjoyment of community facilities).

Methods

Data was collected over a four-year period, using a mix of survey and case study analysis. In addition, the project team monitored other studies coincident with the longitudinal study and the government policy changes occurring during that period.

The first round of data was collected through face-to-face interviews; the second and third rounds used telephone interviews and the fourth round used a mail-out questionnaire. More than 60 per cent of the initial sample was retained over the four years.

Main Findings

In brief, the findings are as follows.

1. The participants had diverse expectations. No distinction between client and provider goals could be made, but this disadvantage is related to the lack of an evaluative role for the study. Several gains occurring during the course of the project were identified, and it was possible to make simple comparisons with other groups that could enable some tentative conclusions to be reached. The case studies provided the contextualised information for this result. Some were in the literacy programs for social reasons, some to learn to read, others to collect financial support linked to attendance, and others to seek enhanced employment opportunities. Given this diversity of motives, it would have been inappropriate to conduct any evaluative analysis of the impact of programs. Literacy gains were but a small proportion of the motives for attendance and participation in the classes.

2. The participants had developed a noticeable shift in reading and cognitive problem-solving strategies. It appears that the majority of them learnt to read: the strategies they reported are not approaches that people develop intuitively without some direction from instructors; people need to be taught to use the basic cueing systems of phonics, semantics and syntax. The transition from dependence on tools and personal support was clear as students moved first to the cueing systems and then to independence in literacy strategies. This is supported by an almost unanimous claim in eleven case studies that the literacy classes changed the students' lives.

3. The literacy classes did affect employment chances. The take-up rate (the percentage gaining employment) on the sample was more than twice as high as in other long-term unemployed groups undertaking a Special Intervention Program (SIP) in Victoria. A difference of 9 per cent and 21 per cent in the first year is too large to dismiss.

4. The access to employment, however, was not uniform, and inequities occurred in the sample. It was clear that males attending literacy classes had greater access than females, and also that once out of the workforce female students had significantly lower chances of returning to it.

5. Self image and sociability measures produced some interesting findings. Initial measures of this construct were obtained in the classroom, but in later data gathering rounds many participants were no longer enrolled in a course. Differences in the sociability measures in and outside the classroom were identified. Hence, focus on sociability in classes using measures at the end of courses, collected by instructors, may be misleading in terms of effects of literacy courses. Sociability in literacy classes appeared to be learnt in the class and specific to it. Non participation in the courses seemed to affect a different type of sociability.

6. This attitude remained high and increased for a period in the program, then seemed to decline for participants who remained enrolled - a clear indication that such an effect was a temporary one, particularly for those who were unemployed. Literacy classes helped for a while but then appeared to lose their impact on participants' satisfaction and self esteem.

7. Retention rates in courses differed for various groups in the sample.

8. Pathways to further study were identified as an immediate outcome for only a small proportion of the initial sample. Some used the literacy class as a means of gaining sufficient language and literacy skill to enrol in other classes and courses. The proportion who used literacy and language programs to engage in further study, and the 30 per cent who were still enrolled after four years, provides mixed information. Many of the 30 per cent were still in literacy classes, and the difference in reading strategies suggested that reading gains were not the main reason for their continued enrolment.

9. Social and community participation altered for the group over the period of the study. Social wellbeing and community-activity indicators showed changes that illustrated increased participation and confidence; increase in confidence was common among participants over time. Use of libraries, community centres and social clubs had increased as had the community activity. All this indicated a substantial change in the nature of the cohort's social and community activity.

10. The participants in either language or literacy classes had mixed motives for attendance. Many were there because of pressure to acquire the social and economic benefits deriving from the classes. Others needed to be able to help with children's schoolwork; yet others wanted to gain skills for work.

11. In some literacy classes the motive was focussed on English language development and on spoken language in particular; many participants enrolled in literacy classes were engaged in learning spoken language. Under the many definitions of literacy, this is appropriate.

12. The effect on employment and work activity was substantial. Changes in employment status were substantially higher for course participants than for potentially equivalent groups in the community. Promotion opportunities, a general increase in confidence and a more outgoing approach to life in the workplace seemed to be indicative of responses.

13. Functional and everyday literacy activities were substantially altered. Positive changes were reported in reading and writing, in numeracy activities and in problem solving strategies. However, there was no obvious relationship between the length of the course and the development of strategies or other potential indicators of learning. Programs that focus on basic skills without the transfer to a range of contexts may be linked to this.

14. Marital status does not seem to have been adversely affected by participation. The evidence does not support any systematic change in this regard greater than could be expected among the general population.

15. The study has provided a large range of calibrated scales and measures pertinent to adult literacy; each has been shown to be stable over time and to specify construct validity. They have enabled the research team to focus more on the generic measures that underpin the items in the scales and to identify, in at least one case, the significant finding that the cohort on the whole learnt to read. The

scales also offer an opportunity for adult basic education instructors to monitor change in client behaviour and to use relatively sensitive measures over time to assess the impact of the program. With the cautions outlined in the report, that attitudes are learnt, users should treat the measures with due care.

16. Outcomes, as measured by instruments devised for this project, showed large differences between groups. The between group differences in education, employment, sociability and community involvement were so great that other explanations were swamped by the effect size. The program provider and group composition could not be separated but this combination is clearly a most important contributing factor to differences in outcomes.

Recommendations

1. The teaching strategies of the practitioners in the classroom should be encouraged and further developed. The evidence that the reading strategies of the sample altered in the direction of 'learning to read' lends significant support to the profession and its practices. In spite of the reticence of the administrators, there is very good reason to examine the outcomes of adult literacy programs in terms of the gains made by clients. Research in school effectiveness is clear about the effect of the teacher. From a value added approach to evaluation it is possible to identify best practice in terms of client gains; then, from more qualitative analyses, it is possible to advance the best approach to instruction and to build this into professional development. Some evaluation in terms of literacy gains is well overdue, and should be implemented. The results in this study indicate that practitioners have little to be concerned about; in particular, it is important to identify the instructional strategies that maximise the gains identified.

2. While the effect of the classes led to reading strategy development, this can further be improved by identifying the successful practices and disseminating them through a professional development model based on best practice. Benchmarking in adult literacy classes should be introduced to capitalise on successful practices. Benchmarking should be established against best practice, as measured by value added indicators. The practices and their impact should be implemented and evaluated.

3. The emphasis on employment as an outcome of adult literacy programs is difficult to justify. While this study showed that access to employment was enhanced, too many steps in the process of developing literacy and gaining employment are broken, and outside the control of the provider. In the workplace itself, literacy programs are provided by employers for economic, safety and humanitarian reasons.

4. Training in oral communication in the workplace needs to take precedence over reading and text based literacy skills. For those who see literacy as oral, this poses no difficulty. Workplace literacy and language programs already focus on it, especially for workers whose preferred language is other than English. The same emphasis should be given to English preferred clients.

5. The adult education program singularly lacks data on the outcomes for individual participants. Reporting outcomes and follow up of programs seems to be a necessity, even if to establish the predictive validity of the assessments conducted and reported in the national reporting system; the system has not as yet influenced the provision, delivery mode, or language in the literacy levels, or the economic benefits of programs to industry. Some analysis of the national reporting data should be conducted to give policy makers evidence of effective practices. Follow up and reporting practices should provide a database that policymakers could use, at classroom, provider, program and systems levels.

6. The emphasis on self-esteem may be misplaced. Adult education teachers need reinforcement in areas of professional development leading to measurable outcomes.

7. Given the importance of the provider/program combination in explaining differences in the outcomes, it is important that more precise value added analyses be undertaken; those reported in this study were hampered by a lack of capacity to follow up. Real value could be identified in the characteristics of programs, procedures, curriculum and teachers, and other factors - such as time on task. Where these can be linked to either positive or negative changes in participants, real recommendations can be made with the view to improving outcomes.

CHAPTER 1. THE PROJECT

In 1992 the Department of Employment, Education, Training and Youth Affairs commissioned the Assessment Research Centre to design and conduct a five year longitudinal study of the impact of literacy education for adults. The department's interest was not to examine reading gains as such, but rather to examine the question 'what difference does literacy education make in the lives of adults?' and, by extension, to determine the difference it made to the community. The lives of individuals were to be examined from the perspective of the educational, employment, community and social changes that took place over the years of the project, and within these areas information was sought about the changes in emotional and cognitive activity levels. The participants' reaction to the changes in their lives were also of interest.

The population for the project consisted of all adult literacy students in Australia attending programs funded by the department.

The goals of the research were to investigate the impact on the lives of participants in Adult Basic Education programs. The main areas of interest focussed on the following four areas:

- **economic and employment wellbeing** (employment status and satisfaction, economic indicators);
- **educational development** (maintenance of educational involvement and advancement, skill development);
- **social well being** (family and personal development - life satisfaction, self esteem); and
- **community wellbeing** (participation and enjoyment of community facilities).

The study also set out to examine the interrelations among these areas and the programmatic contexts in which changes took place. In addition, a long term goal of the project was to provide policy makers with advice relating to the provision and targeting of basic education programs for adults in the Australian community.

The study gathered data about the changes in individual's lives over time through a series of interviews and surveys. The baseline interview was conducted in 1992 with 441 students; a database was then established with names and addresses to enable tracking to be done over the next four years.

This study differs significantly from other longitudinal studies in that the original cohort has been maintained at almost 60 per cent, and additional cohorts have been added over time to maintain the sample size and to allow for changes in circumstances.

The first six months of the study were spent planning data collection methods, liasing with other longitudinal study groups and establishing networks and procedures. After almost a year the first data collection took place, followed by three additional collections in 1993, 1994 and 1995. In addition, a series of case studies was carried out in order to maintain an intense and detailed illustration of individuals in the programs and to supplement and exemplify the broader survey data collected. Figure 1.1 illustrates the data collection phases of the study.

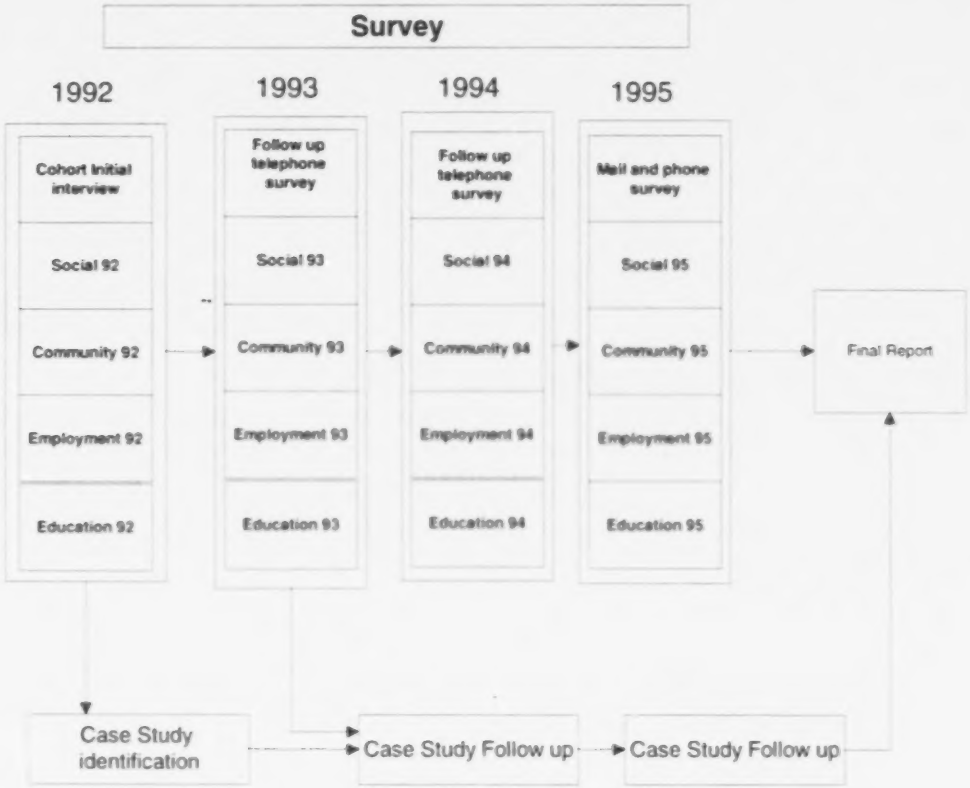

Figure 1.1 The phases of data collection

The project began to explore issues through literature reviews and discussion with other researchers engaged in impact studies. It became clear through this process that the field seems to have been largely ignored and that longitudinal studies in adult literacy are rare. Where such projects have been undertaken, they have been limited to a study of cohorts within institutions and to several small case study projects. It is clear that the present study is the first of its kind to combine both quantitative and qualitative studies of adult literacy impacts.

Consequently very little seems to be known about the impact of basic skill classes on individuals or cohorts. Most studies in the United States, have focused on the impact of the General Education Diploma (GED) (for example, Beder, 1992) - or the end of high school equivalent.

Of the impact studies in Australia one, (Brennan, 1989) involved surveys and consisted of interviews conducted on their own students by adult literacy teachers. This study looked at the literacy and self esteem outcomes as determined by self-report, using independent observers and interviewers as well as survey procedures.

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Essentially seven specific questions were addressed in this project:

1. Did the student's occupational status improve by achievement of employment, a better job or promotion?
2. Did the student establish community linkages by being involved in social organisations, becoming a volunteer participant in community activities or being increasingly politically active?
3. Did the student achieve any personal goals, such as completing a credential or continuing education?
4. Did the student continue to use printed materials through libraries, newspapers or other means?
5. Did the student perceive a relationship between additional education and quality of personal life through improved family life or greater discernment as a consumer?
6. How well were participants able to function in basic literacy activities in society?
7. Did students' attitudes towards education, employment, and social and community activities alter over time?

One purpose of the case studies was to examine the participants' reflections on life before enrolment in Adult Basic Education (ABE) classes. The survey was not used for this purpose because of the time taken to establish such a data base and the difficulty of obtaining suitable data.

Related Studies

Merrifield, Smith, Rea and Shriver (1993) in their first report of a longitudinal study in Tennessee make the point that studies of adult literacy often beg the question about effects. It is assumed that reading development will lead to socially desirable outcomes. Fingeret (1984), however, showed how disruptive some instances of literacy gain can be. Socially critical theories of literacy (Gee, 1990) claim that the social and critical impact of literacy lies beyond the capacity to read and write. Indeed, these theories would have it that the basic skills are tools to greater participation. In a post industrial era, literacy was the basic access tool of an information age and without it marginalisation and disenfranchisement was the lot of those who consequently did not have the skills to access, manipulate and employ information for their benefit. Necessary benefits were those related to social, economic and political life. Those without the skills to participate in a society that emphasised the production, distribution and consumption of information (in much the same way as industrial commodities were produced, distributed and consumed) would certainly be restricted, if not politically, then certainly in the fields of employment, education and social inclusion.

Adult educators believe that their programs change lives. The argument often posed claims that funding to adult literacy programs will increase the chances that adults engaged in these programs will become more capable of participating fully in society, employment, education and politics - that the adult student will become more of a contributor to society and less of a recipient of government benefits. However, there are few, if any, studies that have examined this premise. Darkenwald & Valentine (1984) succinctly emphasise the point:

> *Very few well designed, large-scale studies have been conducted to determine the impact of participation in any form of adult education. The need for impact research on Adult Basic Education (ABE) is especially acute, for the individual and societal needs addressed by these programs are urgent.* (p. 1)

Such a study is not simple. This project goes some of the way towards examining these issues but cannot answer them all. Many were able to be explored because of the extent of the population surveyed (ie. given the wide range in age, employment and educational status, involving those adults studying for the Year 12 certificate, those learning English literacy skills and those seeking to gain basic literacy and information access skills).

Longitudinal studies have been conducted in other settings. In the United States several have focused on changes over time and some on comparisons of cohorts (Merrifield, 1992). Some have used examination records or have taken a single class group and observed them in a training environment and for the duration of their time as students (Jones, 1991). Bossort (1993) observed a small number of students intensively, using a case study approach.

This project combined several of these methodologies:

- first, by maintaining contact over an extended period regardless of students' employment, education, age or residence status and therefore, being able to examine the impact of literacy training both immediately after exiting a program and for some years following it;
- second, by not relying on records held by providers of training, but emphasising direct data collection and supporting survey work with a range of case studies based on interviews and observation.

Adult Basic Education Programs

Literacy provision as a category of adult education received a boost in the 1990s by the attention given to the International Year of Literacy and the publicity given to the issues associated with adult literacy. Coincident with this was a perceived need for Australia to restructure its economy, industry and education system. There was a growing belief that industry had to become more competitive, that English in the workplace was essential (Department of Employment, Education and Training, 1993) and that the capacities to process information, participate in problem solving and process numerical and textual information in printed, computer and signage media were essential skills. The rapidly changing nature of the workplace, the realisation by employers that the workforce needed to be literate and numerate and the rising numbers of unemployed led to an almost irresistible pressure on the community to raise literacy levels. This appeared to be based on an assumption that there was a minimum level of literacy that would enable all citizens to participate in employment, in community affairs, in social exchanges and responsibilities and in education and training opportunities.

While adult literacy programs have been conducted for decades, little is known about their impact on the participants, or on industry productivity, training, or flexibility of the workforce. Neither is much known about what has happened to the participants. It is relatively simple to collect anecdotes of students who have succeeded and have been introduced to reading, which has opened up a new dimension in their lives. On the other hand, the media are fascinated by the negative side of literacy and insist on reporting on levels of 'illiteracy'. Alternatively, literacy workers tend to focus on the positive and now refuse to use or even recognise the word 'illiteracy'. Every literacy teacher has or has heard success stories of those who proceed to higher education from basic literacy classes.

The field of adult basic education in Australia has been increasingly active since Wickert (1989) released a study of adult literacy. Skinner (1997) also studied the literacy levels of adults in Australia without considering the impact on programs that the earlier study had identified. However, apart from these projects very little systematic and rigorous large-scale research has been undertaken in this area. Industry has been in a quandary as to whether to give literacy and numeracy the status of vocational competencies. At times, the standing of the adult learner has diminished in the continuing process of change. The amount of money involved and the power and influence available to key individuals and organisations has meant that at times the focus has been on lobbying for control of funds rather than on the impact of the programs on the learners. Yet, while this 'big picture' battle raged, most practitioners worked on, often oblivious to the power struggle being waged in capital cities and bureaucratic organisations, simply continuing in the task of helping adults learn to read and write and to develop their language skills. Some also focused on the capacity to deal with numerical information and to carry out numeracy applications in everyday exercises. Very little has been written about the programs or the practitioners whose work is developing the literacy skills of individuals and no systematic or wide scale studies of adult numeracy have been conducted or reported. Internationally, there have been very few longitudinal studies of either literacy or numeracy, although at least three have been coincident with the current project (Bossort, 1993; Jones, 1991; Merrifield, Smith, Rea & Shriver, 1993). No Australian studies other than this project have been conducted into the impact of literacy programs on the education, work, social or community aspects of participants' lives, although this has been incorporated (OTFE, 1995) in a minor way in the study of adult and community education outcomes. In the light of this, the project examined the changes over time in these aspects of adult learners' lives and explored the possible attribution of these changes to participation in adult basic education classes. However, the study did not measure literacy skills per se, and so the link between literacy and changes in life circumstances cannot be drawn. The study can only link participation in classes to change in life circumstances although some quasi measures have been developed.

Adult Literacy Participants' Goals

People make choices all the time, and those choices are often constrained by limits on knowledge, perceptions and beliefs, and by attitudinal barriers (Merrifield, 1993).

There have been studies of the reasons for participation in adult basic education programs (Brennan, 1989). In most cases, participants choose to attend, on the other hand, many are forced to do so in order to receive financial support. In other cases, the choice may be constrained by circumstances other than a desire to learn. Often a return to education is forced by circumstances beyond a person's control, such as the closure of a firm, a reorganisation of an industry and a downturn of job prospects. The impetus to enrol in a course may be based on these factors, but often it is not the first time such a move has been considered; previous reluctance to participate has been related to barriers strong enough to prevent it (Thomas, 1990).

Many of the barriers to participation in training are socioeconomic, demographic, psychological or social in nature; Merrifield (1992) provides details of these. The most serious are the psychological and social, which may often be more important than the demographic or socioeconomic in deciding not to undertake training, particularly literacy training. Perceptions of age (rather than age itself) may be important; for example, 'I am too old to go to school'. Companionship also is important; for example, 'My friends don't go to the classes, so I won't' or 'I was scared of doing the course'. It is common for literacy studies to focus on self-esteem, feelings about oneself and life satisfaction. Each has repeatedly been found to be important, and studies consistently show increases in self esteem when participants engage in literacy classes (Beder, 1992; Seppanen, 1991; Merrifield, 1993; Darkenwald, 1984). Adult educators often expect that bad memories of school will lead to reluctance of adults to participate in literacy classes, but this is not always the case. The perceived value of training is an important factor in helping them in the decision to participate.

Stein (1995) identified four purposes of literacy and argued that they form the major basis for adult participation in literacy programs. The purposes were:

- to gain access to information and orient people to the world;
- to give voice to ideas and opinions and to have confidence that the voice will be heard and taken into account;
- to solve problems and make independent decisions as parents, citizens and workers for the good of families, communities and the country;
- to act as a bridge to the future, in that it enables them to keep on learning in order to keep up with a rapidly changing world.

Low literacy levels affect both men and women. Being employed is strongly related to both personal and community satisfaction (Merrifield, 1993) and the corollary also is demonstrated: being unemployed is related to lower attitudes towards both personal and community issues. Many studies point to lack of education opportunities as a reason for unemployed people being unable to find work. Higher self-esteem seems to be related to being employed (Merrifield, 1993 and Griffin & Smith, 1997). It is typical for participants to leave ABE programs after securing employment; hence, the utility of the training program is clearly linked to employment.

Several studies have explored the issue of attitudes and participation in training programs (for example Corcoran et al, 1996). However, they have tended to focus on multiple outcomes as measures of the effect of participation in the program. This project differs in that the assessment of attitudes focuses specifically on adults and their choice to participate in adult education programs.

It is not new to attempt to describe beliefs about the impact of literacy training. However, published studies are surprisingly uncommon and the lack of available indicators of literacy impact has perhaps led to a folkloric approach to its assessment and to the heavy emphasis on self-esteem studies. Anecdotal reports and isolated incidents arising from employment offices and from practitioners dealing with reluctant participants (enrolled in order to receive benefits and departing as soon as possible) are common. Documented systematic studies are difficult to find. Despite the recent study (REARK, 1995) of the Special Intervention Program and the subsequent report of extremely high levels of satisfaction with it, the measures seemed to be based on a single question that could well be eliciting a socially desirable response pattern. Part of the problem of obtaining documented evidence of outcomes of literacy programs may be a reliance on anecdotal evidence, using methods that cannot be replicated in a range of settings, and an insistence on

the contextualising of the assessments. Reluctance to use any instrument to measure program outcomes may have led to this dearth of information about pre- or post- program outcomes. Anecdotal studies and data collections are difficult to interpret in any systematic manner, and hence are difficult to report. There are a large number of indicators of outcomes that address issues such as learning environment, anxiety, self-concept and interest inventories for use in schools, but such scales are rare for adults or for training programs.

In a study of Canadian students, Thomas (1990) emphasised the varied nature of the adult education student group. She identified ten factors or major reasons for adults to take part in basic education, including literacy programs: educational advancement, self-improvement, literacy development, diversion (hobby), community and church involvement, economic need, family responsibility, job advancement, and enhancment of social networks. Corcoran et al (1996), in the study of long term unemployed persons' reactions to basic education training, illustrated a very similar progression of attitudinal development. It is often assumed that students' motivations are stable and that they lead, through participation in adult literacy classes, to positive outcomes and the realisation of all their hopes embodied in their expression of the motives for participation. Fingeret (1984) and Corcoran et al (1996), however, illustrated that the effects of adult basic education participation were not all positive. There were risks attached to the program for participants. Learning to read and write may mean that established friendships are fractured; students may become alienated from existing support networks. In fact:

> *Illiterate adults know that as they learn to read, all of their network relationships must shift. They will have less time available to respond to the needs of others, and their own needs will change. Previously secure niches in the social order are weakened as (established) readers' skills are requested less often* (Fingeret, 1984 p.144).

As a result, self esteem and the perception of social and interpersonal relationships may change as a result of participation in literacy classes.

The adult learner is generally assumed to have a basic need to learn to read and to develop in a personal sense. As Fingeret (1984), Corcoran et al (1996) and Thomas (1990) illustrate, the motivations and attitudinal outcomes can be diverse. The expectations outlined by Brennan (1989) and others were predictable, but lacked insight into the risks and potentially diverse set of possible losses from participation in adult basic education classes.

System Goals

Adult education practitioners have been subjected to a large range of developments in recent years, particularly after the International Year of Literacy. Both policy makers and practitioners have been redefining and publishing their goals for students (OACFEB Framework 1993). Literacy programs such as those offered by SkillShare have addressed more than reading, numeracy and writing skills; they have been devised to address skills seen as necessary tools for obtaining and retaining employment, changing jobs, gaining access to further education, improving self esteem, helping children and others with reading and access to information, participating more in the community, improving communication skills, developing general life skills and developing better family relationships. Particularly strong has been the movement, loosely based on Freire (1971) and critical literacy theory, to empower marginalised groups and to encourage adults to become more active politically. Each of these, if successful, should lead to more active participation in the community.

Program evaluations addressing issues in adult basic education have focused on curriculum, on methodology, on ideology and the philosophy of the practitioner, on assessment and on the process, but the opportunity to focus on outcomes, apart from the Brennan (1989) study, has rarely been given; studies that focused on outcomes were essentially investigating and reinforcing those already established by providers. In general, this is viewed by practitioners and by adult literacy organisations as an acceptable form of evaluation because it provides immediate and formative information on how to improve presentation and content for the short-term outcomes of the course. However, it is possible that participants' views of the programs may change once they have been out of the program for some time. The immediate gains may be diminished by experience after training ceases. Bossort (1993) contends that client experiences over a ten

year post program period make the validity of evaluations of current programs questionable when life goals are taken into account.

Literacy students attending programs are vulnerable and impressionable. It may, for instance, be the first time anyone acknowledges needs, insecurity, and a sense of failure in education. Adult basic education teachers establish rapport with the students, and it is common for student evaluations to reflect personal impressions of the teachers as well as the impact of the program. Students often continue to attend classes even if the program and the development of skills is causing personal upheaval in their lives because the support and encouragement is so positive. It is therefore important to ask them, after some time has passed and the personal relationship with the teacher, other students and the curriculum has diminished, whether the program has had a lasting impact on their lives.

The providers have articulated all these goals. More particularly, policy makers and organisations associated with adult basic education classes (OTFE, 1995; Kelly, 1993) have articulated separate goals, but there does not seem to have been any attempt to identify whether the participants share the vision in either the implicit or explicit agendas. Given that the present longitudinal study was non-evaluative, it was not possible to address the issues of whether participants achieved these goals and, if so, how the program affected their achievement.

The profession of adult basic education is relatively young. It is still emerging through a constantly changing pattern of political, ideological, philosophical and methodological approaches. While such education has a long and respected practical tradition, a coherent body of research and theory has been slow to emerge. Now, the various stakeholders in the field engage in a contested discourse over outcomes, priorities, ideologies and methodologies, the disputation takes on characteristics much stronger than those of simple differences of opinion.

The National Languages and Literacy Policy (Department of Employment, Education and Training, 1991) emerged as a response to a converging, if not coherent, set of beliefs that adult literacy provision was an important need and that the federal government ought to be the agency to provide for it. The large funding given to adult literacy programs was in part justified and even instigated by a national study of adult literacy (Wickert, 1989). Despite the limited nature of that study, with its self-selecting sample, its restricted view of literacy and the inaccurate interpretations it made about the non English speaking background population (NESB), it has greatly influenced government, industry, education and community groups. It is perhaps a reflection on the evaluative research strength of the adult literacy field that the study, replicating a small fraction of a similar study in the USA (Kirsch, 1986), could have such an effect. It is also a reflection of the changing economic and industrial scene that the community, government and industry were ready to be told the message of the study which is paraphrased thus:

> Higher levels of adult literacy are essential...lack of literacy costs the nation millions of dollars...large proportions of the community and the workforce in particular are not functionally literate. (Wickert, 1989)

In an era of economic rationalism, such messages were seized upon as strong evidence for rational and instrumental approaches to education. Despite this, costs to industry of low literacy levels have been estimated as more than 3 billion dollars annually (Miltenyi, 1989).

Possibly as a result of the initiatives following the International Year of Literacy, adult literacy simultaneously received a boost of funds, credibility and importance to levels it had never enjoyed before. Along with its increased profile came the ideological, political and philosophical struggle for ascendancy. The higher profile, and the insistence that literacy and industry success were inextricably connected, came with a struggle for control over the curriculum, the disbursement of funds, and the kudos that came with the additional presence outside the further education or community classroom. Industry leaders insisted that workers released for classes learned to read. Those workers who attended classes in their own time associated the development of literacy skills with increased opportunity for advancement in employment. For the unemployed, classes offered hope of access to the workforce. Alternatively, workers who were identified as 'illiterate' were often identified for 'out placement' when 'downsizing' in industry began. Some enterprise management groups argued that it was a cost they should not have to bear and most did not want to acknowledge or deal with literacy difficulties among employees; there was a preference to employ workers already literate and to screen out those who could not demonstrate basic literacy skills. Griffin (1992) illustrated that management and workers alike, considered that literacy and numeracy were to become

increasingly important in the workplace and in the lives of people generally. Although quite clearly, the nature of that importance seems to have varied according to whose interests were being considered.

Industry was also engaging in a restructuring of workers' roles. With the introduction of competency based training and credentials, total quality management, quality assurance and international best practice pursuits, workers were expected not only to be literate and numerate, but to be multi skilled, constantly retrained, and flexible. The importance of literacy in education and training was inextricably linked to its importance in the workplace. Government funds were made available to address an issue that industry might have preferred to ignore. The DEETYA (1993) Workplace English Language and Literacy (WELL) program funded programs in the workplace and assisted enterprises with helping their workers develop literacy skills whilst at work. This is, in part, recognition of management's argument that it may be partly the government's responsibility to contribute to the reduction in the deficit in literacy skills among the workforce. On the other hand, many industries and employers have accepted responsibility for workers employed in times when literacy was not considered as important. As such, some enterprises have established their own language and literacy programs, either self-funding them entirely or receiving support through the following programs: Adult Migrant Education Program, English in the Workplace, the adult literacy program, the workplace language and literacy program; or via a host of other specialised programs designed to enhance employability.

All these developments reflect the role of literacy in peoples' lives from the perspective of government, industry leaders, employers, providers and community groups for which its importance in education and in training for work, community and the social aspects of life was firmly established.

So far, the literacy link to the economy makes sense and appeals to an intuitive sense of what is right. However, there has been no research information as to how best to foster that link. For example, no empirical studies have been conducted to determine the extent to which the WELL program increased literacy levels in the workplace. There has also been no empirical link established between literacy and productivity. Attempts to monitor outcomes against literacy standards or measures of achievement have been fiercely opposed by literacy teachers and trainers. Even this study is constrained in its brief to examine participants' attitudes, expectations and gross level outcomes. Yet so much is based on folklore and belief, and so much is invested in the area on these bases, that it is surprising no accountability measures are demanded. It is even more surprising that studies are not commissioned to establish the links between workplace literacy instruction, literacy gains and productivity gains or net returns on investment by both government and industry.

CHAPTER 2. THE DESIGN OF THE STUDY

As discussed in chapter 1, few studies of adult literacy outcomes have been conducted. Moreover, their effect on environmental aspects such as employment, education, social and community activities does not appear to have been examined simultaneously in any study.

The relationship between the environment and educational achievement has been examined by Keeves (1972) in a study of school achievement. Keeves related the attitudinal, process and structural dimensions of the learners' environment to achievement in a school setting. The potential of this study for the present investigation was considerable; its process and structural dimensions explored and defined the activities and physical attributes of the environment while the attitude dimension explored and defined the personal attributes and feelings of learners. These dimensions of the environment were examined in three contexts: the home, the school and the peer group. The parallels for the present study offer a systematic paradigm for exploring the relationship between personal, process and structural (or contextual) attributes of the learners' environment and outcomes in the employment, education, social and community environments.

A matrix depicting the personal, process and contextual factors that can influence the educational, employment, social and community destinations of adult literacy students is shown in Table 2.1. There was a rich resource in cross-sectional studies of adult literacy that examined most combinations of personal, process and context dimensions in employment, education, social and community environments, but these classifications were not identified. In the first stage, the literature on adult literacy studies was examined for potential explanatory variables and these were assigned an appropriate cell of the matrix.

The interview schedule was developed on the basis of the matrix shown in Table 2.1. Subjects were asked a range of questions in each of four areas: education, employment, social and community activity within each of which they were asked to comment on its personal, process and structural circumstances of their lives.

Data Collection

Appropriate research methods need to be selected to discover how adult literacy programs change their clients' lives. This study is built on both large-scale quantitative analysis of interviews and ethnographic case-study analyses of a smaller, select group of individuals. The survey data is in response to predetermined questions, which rest on assumptions made and analyses of previous studies of the relationship between their literacy and their participation in society.

Ethnographic case study approaches are valuable because they provide a viewpoint that cannot be easily obtained in another way. For the most part they offer the prospect of looking from the inside at the situation or phenomenon being studied. Exploration of lived experience can be enhanced by the 'insider's view' that comes from treating subjects as informants and using a series of interviews and direct observations. This may provide a sense of how the members of the cohort see their own literacy and its effect on their participation in the world.

Table 2.1 - The framework for the longitudinal study

	Employment	*Education*	*Social*	*Community*
Personal	Confidence, self esteem, satisfaction, aspirations, morale, motivation perceptions	Peers and self, family attitudes, significance of others' and aspirations, motivation (extrinsic, intrinsic), morale, persistence, perceptions (ability to describe), needs, morale	Family roles, expectations, aspirations, age, gender, marital status, priorities, confidence in self/future, security, sense of control, social and interpersonal confidence	Knowledge of facilities, aspirations, motivation, approach/avoidance, identity, perceptions and descriptions, welcome tone
Process	Mobility (promotion), involvement/interaction, absenteeism, productivity, flexibility, reskilling, status, changes to, skill base acquired, language(s) used, literacy activity, numeracy activity	Time involved, mode, knowledge of offerings, uptake of opportunities, starting points, participation, mobility, awareness, success/failure, resources needed, learning/teaching style, finance, promotion outcomes, formal and informal, language(s) used, literacy activity, numeracy activity	Roles, social interaction, leisure activities, family rituals, language(s) used, literacy and numeracy activity	Interaction, use of facilities, involvement and participation, cultural pursuits, language(s) used (home), community, work, school, literacy activity, numeracy activity, Year 12 participation, Neighbourhood Watch involvement, CES, reliance on other people, symbols, survival strategies
Context	Participation – (status), type of opportunity, locality, mobility, duration, skill base required (Awards), occupational health and safety, income	Viability Accessibility – (including learning resources), time available, cost, articulation arrangements, appropriateness, support services (e.g. child care), delivery mode, agency/provider, location, certification required, and education background	Family size, ethnicity, status, family structure, peer group nature, financial status, life circumstances, family responsibilities, careers	Culture(s), location, services available and communication of socio economic profile of the community, employment figures, education services, community facilities/clubs, support services, ethnic composition, stability, religious facilities, values, climate and activity level/vigour

The necessity of a dual approach arises because the notion of literacy itself is not unproblematic. The Australian Language and Literacy Policy (Department of Employment, Education and Training 1991) refers to literacy as a *'continuum of skills'*. At one end of the spectrum, literacy could be limited to *'minimal reading ability without writing ability'* (p.34) and further, that *'...literacy also includes the cultural enrichment which comes from immersion in and responsive reading of the body of Australian and world literature.'* (p.35)

The policy adopts as a goal that: *'All Australian residents should develop and maintain a level of spoken and written English which is appropriate for a range of contexts with the support of educational and training programs addressing their diverse learning needs'*(p.xiii).

Alternative conceptualisations of literacy are evident in much of the recent literature (Luke, 1993). In many of these, it is thought of as complex sets of social practices and values. Given this view, then, close ethnographic analysis of the 'lived meaning' of literacy of participants in literacy programs should begin to reveal something of the nature of the social practice and values of literacy for those who participate in the programs. This is not to suggest that the lived experience of any one participant will be the same as another, but that a selection of ethnographically derived illustrations will add diversity, depth and explanatory power to the interpretation of data obtained by surveys of a large representative cohort.

A dual approach, such as is outlined above, offers another advantage. General trends noted by analysis of previous survey data can be used to focus the ethnographic observation of informants to the case studies, and case-study observations can help to refine and refocus aspects of subsequent surveys.

Annual Surveys

Data was collected from three states in large metropolitan regions, rural cities, country and remote locations. Every effort was made to ensure confidentiality. No intention existed for any evaluative study of any agency involved in adult literacy programs.

Field workers were engaged and trained for data collection. Phase 1 interviews were conducted face to face, phase 2 and phase 3 were conducted by telephone and phase 4 by mail survey. Those without a telephone were contacted by mail and through follow-up procedures, which identified a place or alternative contact for the interview and arranged a time either directly or indirectly. Follow-up interviews were randomly conducted to check validity of the original interview data and to ensure that the same people were being interviewed from phases 1 to 2 to 3; on six occasions it appeared that children or partners were substituting for subjects during telephone interviews. Follow-up procedures were used to obtain data from the correct subject rather than accept answers on behalf of the initial phase 1 subject who was interviewed face to face.

Phase 1-1992

Forty-one field workers were given a one-week training program in interviewing, recording and establishing rapport with the target group. They were assigned to participating providers' programs and spent two to three days visiting classes, getting to know the adult participants, explaining the project and ensuring that the participants understood its nature; this included the long-term commitment required from both the participant and the research team. Each interviewer conducted an average of ten interviews over a two-week period in agencies such as adult migrant education, TAFE, industry, SkillShare and other community programs. This phase continued from November 1992 to April 1993.

Phase 2, 1993

Phase 2 telephone interviews extended from October 1993 to April 1994. Case studies of fourteen adult representatives of the major categories of gender, employment and language background were also initiated during this phase.

Since it could not be assumed that participants would still be attending the same classes in phase 2, home addresses, phone numbers and alternative contacts were documented during the phase 1 interviews for later follow-up procedures. This database would enable contact to be maintained throughout the study.

Several field workers, including all members of the project team, conducted the phone interviews. This had several advantages: first, the interviewers were constantly checking results, discussing approaches and improving methods; second, it was possible to identify when additional interviews were needed. The disadvantages involved timing, as most interviews had to be conducted in the evening, and difficulties

emerged in confirming the details obtained in phase 1. Interviews in the second year were considerably shorter than those in phase 1. Telephone interviews need to be shorter than those conducted face to face, but also it was not necessary to collect such a large amount of data, given the baselines and demographic data established in the first phase. Each lasted approximately 15 minutes, although many respondents prolonged them considerably, indicating that they valued the interest taken in their progress.

Phase 3, 1994

In 1994, the data was again collected by telephone. On this occasion specific efforts were made to link the variables directly to the four contexts of the study (community, education, work and social activities).

Phase 4, 1995

At this stage, the project team made the decision to mail a questionnaire to participants. This was done in full understanding of the risk involved: sending mail-out surveys to literacy program clients begs the question. However, consideration of a four-year participation in the literacy program, together with earlier analyses of data indicating that progress had been made in reading, prompted the team to take this approach. Instructions were included to allow another adult to assist in completing the questionnaire, if necessary. Follow-up telephone interviews also were conducted.

Findings from the annual surveys are reported and discussed in Chapters 3 and 8.

Case Studies

The task for ethnographic description is to find opportunities for the informants to tell their own stories, but beyond that it requires discovery of ways of selecting, ordering and foregrounding the aspects of those stories that are faithful to the original. At the same time such aspects will illuminate what the quantitative analysis of survey data has revealed, or will provide the base that will be further explored in subsequent surveys.

The case studies enabled examination of individuals to be made in a range of contexts and in different circumstances much more clearly than a single interview could do. Systematic connections between education, work, community and social destinations of the participants in adult basic education programs were explored through the personal, contextual or activity domains defined in the study proposal.

Pre planning and establishment

This stage established the approach. It included the formation of the case-study project team, the identification of individuals to be included, and the initial discussions about the focus and potential outcomes of the project.

There were several target populations and groups of informants that included both employed and unemployed adults, people from English speaking and non-English speaking backgrounds (ESB and NESB), and gender groups. Each of these became a source of information at both the individual and the group level. A selection of one member from each category was required, yielding a group of eight informants. Of these four remained as participants. One further intact industrial cohort was selected as a separate cohort case study. There are ten case studies from this group.

The case studies represent the three main groups in the project: employment status, gender and language background. These categories are represented in Figure 2.1.

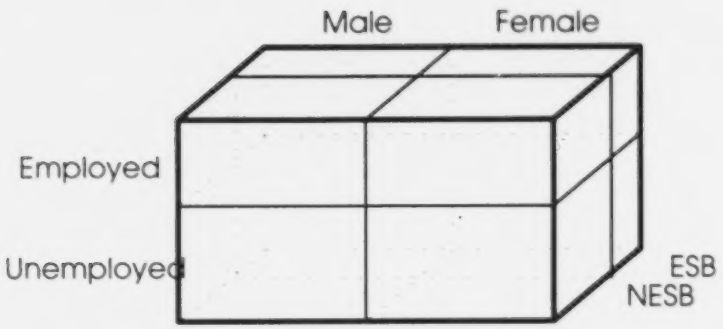

Figure 2.1 - Case Study Categories

Case studies drawn from these categories are outlined in Table 2.2

Table 2.2 – Allocation of Case Studies

	Employed		Unemployed	
	Male	**Female**	**Male**	**Female**
ESB	Michael	Julie	Harry	*
NESB	Workplace group (n = 2)	Workplace group (n = 8)	*	Serina

* Case studies in these cells cannot be completed, owing to loss of contact with, and ill- health of, informants.

What Was Wanted from Informants

The study was concerned with the employment, educational, social and community destinations of adults who were in various adult literacy programs. In the case studies we wanted to identify what the informants thought about these aspects of contemporary life and how their literacy ability might have impinged on their lives. As the study was a longitudinal one the focus was whether, and how, the views changed over the period of the study.

It was important to recognise that informants had very different notions from interviewers as to what each, or any, of the headings meant. Their ideas were effectively revealed by using open-ended questions that let them reflect on the issues rather than simply repeat their own life histories.

Initiation

The project advisory committee helped to formulate reporting plans so that the policy and information needs of both the client and the adult literacy community could be met. Conferences were conducted to clarify the perspectives that case study researchers had of the individual cases; issues to be resolved included how perceptions differed, how they were the same, what themes appeared to be emerging, and how these differed from or cohered with the findings of other known case study reports of adult literacy clients.

After selection of the case study participants, interviews with teachers were conducted to identify what was expected from the education program; to a large extent, this was dependent on the development of the overall study design. A series of questions, hypotheses and related issues were developed by negotiation with the participants, and models of case studies of adult education were reviewed to establish the basis for the interviews. Anticipation of problems, atypical events in the lives of the participants, attributes, significant persons, and so on were examined so that a clear outline of the case could be established.

Preliminary Interviews and Discussions

Preliminary visits were conducted to enable the observers to 'get a feel' for the range of activities about to be documented. This helped to determine the extent of involvement. Potential costs, both to the program and to the individual, also had to be established at this time; these included time, and inconvenience for the informant. Details to ensure confidentiality of data, sources and reports were established, as well as arrangements for review of reports and drafts, and confirmation of data inputs. Ownership of materials was documented and agreed upon. The role of the project team members was clearly spelled out to the participants as well as other issues of concern.

Preparation for Observation

After obtaining consent, the informants were engaged in open-ended discussions in which the general issues were raised. Field notes and, where possible, tape recordings of their comments were made. Follow-up visits were arranged so that the subsequent interviews could be conducted in a range of different contexts. Allocation of roles, resources and persons, methods, issues and phases of the study needed to be piloted in each setting. Additional key informants, related to the individual or connected through the adult education program were identified as sources of particular data, and permission to talk to them obtained in writing. This also involved the identification of the type of data needed. Instruments for data collection needed to be developed, as were any standardised procedures. Record-keeping systems were prepared, including journals and logbooks for key informants.

Data Gathering

In addition to the questionnaires, self-report logs, inventories and artefacts were gathered. These included letters, notes, completed forms, items read, old school reports, family albums and references, such as from employers etc. These artefacts could be of value to interviewers when reviewing case study clients. The views of family members and of others significant in the lives of informants were also sought where possible.

With the informant's permission, interviews were tape-recorded and then transcribed. It must be stressed that this was not just an exercise in recording answers to questions. Although the intention of the case studies was to let informants tell their own experiences in their own voices, we were also interested in searching for patterns of commonality and difference in these experiences.

Interviewers also used field notes; these are an essential component of ethnographic research. They form a continuous diary in which the researcher records every encounter with his or her informant. They include notes as a supplement to what was said in any tapè-recorded interview. In addition, they include any impressions or anecdotal observations made at the time, and also personal impressions, even when the evidence for the validity of these seems absent or doubtful. This is important later, when interviewers search their notes for patterns.

The case study participant's responses to the study's annual questionnaires were examined and taken into account in the interviews.

Interviews of teachers, family and work mates were conducted on at least two occasions to identify changes in variables. Further observations were carried out to record changes in context of the work, education, social and community settings over the period of the study. The initial interview covered participant's self-efficacy, time spent in courses, age, language and educational background, as well as his or her impressions of the education programs and the educational culture. Then, as information became available about the specific cases, the emphasis shifted more towards the grounded base for the data collection.

The observers used a range of approaches to obtain informants' perceptions:

1. Extended information from each case was obtained by combining interviews, observation schedules and artefact collection.
2. Methods of verifying the observations were established as audit trails; an audit trail is a means of documenting and justifying how generalisations are reached.

3. Narrative interpretation of the observations were developed.
4. Procedures for verifying concordance between the narrative interpretation and the observations were established. Verification had to be 'built in' to run continuously and at different levels, so there had to be an explicit reference to observer bias and a means of accommodating that. Given that most of the interviewers were conducting several case studies simultaneously, there exists a potential methodological approach to auditing and cross validation of assumptions, techniques etc.

Informants were encouraged to express their own views, so it was possible to probe feelings in response to information that was either volunteered, or provided in response to interviewer probes. The observation schedules for interviewers provided the possibility for case study analysis to seek direct observational data, which could include documentation of:

1. The relative degree of confidence in answering questions;
2. The relative fluency/ease of comprehension demonstrated;
3. The relative level of self-assurance in discussing literacy use;
4. Social competence in the context of the interview;
5. Evidence of the informants' sense of their own social competence, for example, making friends;
6. Seeking information, making inquiries, use of community resources, seeking employment (mostly culturally constrained, if not culturally determined);
7. Evidence of how informants dealt with written sources of information;
8. Artefacts such as sample notes, letters, lists, memos written, books, pamphlets, magazines and forms used by the informant.

Validation

Quantitative researchers write and talk about validity, by which they mean the confidence they can have that their data actually reflect the phenomenon in which they are interested. The parallel concept in ethnographic research is trustworthiness where the focus is to establish that the findings are properly grounded in the experience of the informants.

Three forms of validation for the case studies were used:

1. *Triangulation* - a term used to refer to a practice of not reporting a generalisation unless multiple independent pieces of evidence can be found to support it. Any reported generalisation must include specific reference to the evidence that generated it. Observer biases and value positions were identified and reported. Cross-validation among interviewers assisted in this process.
2. *Audit trail* which is a means of verifying any conclusions by showing the process by which they were generated (Smith, 1985). Typically it is achieved by reporting the results of a debriefing of the researcher by a sceptical reviewer so that the reviewer is convinced that the evidence supports the conclusion (Patton, 1977).
3. *Informant-checking* (Wolcott, 1988) where informants verified that the content of the report accurately captured their perceptions of their participation in the world.

Triangulation of the impressionistic data was carried out through direct observation, with peer assessment as a means of corroboration. Audit trails typically took the form of a debriefing with another case study observer who was not present at the interview and who deliberately took a sceptical view of any generalisation. The observer had to justify any interpretation to this auditor, using the evidence of field notes, tape recordings and artefacts. A consensus view prevailed.

Analysis

Both qualitative and quantitative analyses were conducted on data collected in the case studies. Qualitative analyses and anecdotal records enabled further identification of interacting influences on the links between education and impacts in education, work, community and social contexts. Course data on group composition, culture, output and performance was also collected, both at a group level and for case studies. Field workers matched their observations to the quantitative data on each of the participants.

Details of the case studies are found in chapter 9.

CHAPTER 3. THE POPULATION SAMPLE

A sampling frame was established after contacting organisations such as TAFE, AMES, SkillShare and the Uniting Church in all states for population sizes in adult literacy programs. Efforts to get firm figures from New South Wales TAFE failed, as they declined to either participate in the project or to provide statistics to support it. Replacements with community providers and SkillShare made up minimum numbers, but these could not be regarded as representative of New South Wales. Without an accurate estimate of the population of interest, generalizability of the sample is problematic.

The adult literacy programs represented in the study are drawn from labour market and concurrent literacy programs in both metropolitan and rural settings.

From the initial modified frame it was possible to draw a sample that represented the program population based on figures provided by state authorities and assumptions made about information withheld. Thus, a three-stage sampling frame was designed. First Victoria, Queensland and Western Australia were selected. Within each of these, a sample of both city and rural providers was selected and classified according to their status as TAFE, migrant education, workplace or community. Then, using the procedures outlined below, a sample of adult learners was selected according to their willingness to participate. While it appears that a volunteer sample was selected, the field workers approaching clients in class settings reported refusals of less than 2 per cent.

Each year except 1995, a supplement was added to the sample. Each additional group was small, but added a cohort to the longitudinal study to enable some assessment of shifting baseline data. The annual additional subjects (for all years except 1995) were mainly drawn from regions where employment programs had been offered predominantly for ESB workers.

In the early stages of the project, it became clear that DEETYA required a representative (rather than a random) sample, to consist of approximately 50 per cent from an English speaking background and 50 per cent from non English speaking backgrounds. The basis for this decision arose from the national study of adult literacy (Wickert, 1989), which indicated that about half of the lower level adult literacy group were from a NESB population. However, the figures quoted from Wickert should not be used either as a guide for literacy program studies in general or for this study in particular, for a number of reasons that are detailed below. Wickert used a self-selecting sample of which 14 per cent were from non English speaking backgrounds and neither the sample nor the population nor, indeed, the study itself had any relationship to the need to enrol in adult basic education classes, nor did it have any impact on actual enrolment figures. Moreover, given the way in which they were established, the results of the national study could not be generalised to the Australian population. That is, a sample of 1496 from more than 7500 targeted over the age of 18 and more than 4500 approached makes any generalised use of the results extremely doubtful. Nevertheless, so badly needed were any results of Australian adult literacy levels that the study results were never questioned. Government, industry and educators, eager to secure the profile that the results could give, seized upon the data and used them for a range of purposes. After several years, the data have become established as the benchmark for adult literacy studies.

Adult literacy programs offered through Technical and Further Education providers are a state responsibility but are supported by Commonwealth or national funds provided by DEETYA. Other providers are funded directly by the Commonwealth. In this scenario, programs have been funded by a range of organisations including the Department of Employment, Education Training and Youth Affairs (DEETYA), the Department of Immigration, the Department of Industrial Relations, State employment rehabilitation programs and various community groups. Pollock (1993) indicated that the population of adult basic education students does not reflect the breakdown interpreted from the Wickert study. This is not surprising, given that the studies addressed different populations; Wickert studied the performances of a sample of the Australian adult population on a series of literacy tasks. This data has been interpreted generally as indicating that the fourth quartile of the population, in terms of literacy levels identifies those in need of literacy training. However, identifying the lower quartile does not necessarily define or include the adult population that elects to attend literacy classes. This project sampled from the population that elected to attend classes funded by the government (DEETYA); in a sense, it is based on a volunteer group of basic literacy students, and a representative sample of these. Nevertheless, the sample can be argued to represent the population

required by DEETYA and the results can be used to describe the population of interest. Reservations about the issue of language background are supported by the 1997 report prepared by the Australian Bureau of Statistics (Skinner, 1997) on the literacy levels of the Australian population. The sample in that study and declared small sampling errors gives much more confidence in the result that the proportion of adults with lower levels of literacy or with literacy difficulties is much smaller than that reported by Wickert. Of course, it could be that in the eight years since then levels of literacy in the Australian population have risen as a result of the work of adult literacy educators.

Language Background

Adult basic education students can be described as being drawn from two populations - those whose first language is English (ESB) and those whose first language is other than English (NESB). The literature is diverse in its definitions of language background; most fail to address fluency in mother tongue for NESB people, or to establish whether English is the current language of choice. The inherent assumption that a language other than English constitutes a disadvantage in educational terms is open to challenge; the ABS (Skinner 1997) study of literacy shows that 91 per cent of Australians are most comfortable using English, which is consistent with the approach taken in this study. The project team argued that literacy in Australia demands English as a medium in the community, education and the workplace; only in social contexts could it be argued that languages other than English could be the predominant ones for NESB speakers. The project sought to identify participants in terms of the language they most commonly used, and with which they felt most comfortable. Classifying participants as NESB because they began life speaking a language other than English would include people who now speak only English, such as, in many cases, adults who came to Australia as children and learnt English after starting school. The mother tongue has diminished to rare use among many of these participants for whom English is now the preferred and first language.

The difficulty in determining the NESB/ESB ratio in adult literacy points to the crude and unrealistic nature of a dichotomy that serves more as a category in allocating funding for programs than as a conceptual distinction or as a description of the major language used by participants. It may also be counterproductive in terms of recognising the language needs of participants attempting to become literate in English.

Collecting Data and Monitoring the Sample

Conducting surveys in adult education in Australia had become problematic given the large numbers of other surveys and case studies undertaken. Many provider centres were weary of being studied to the point where the research projects were beginning to interfere with their programs. Despite this, co-operation with the project was excellent. TAFE colleges, AMES Centres, SkillShare, community organisations, unions, workplaces and other groups connected with the provision of classes were extremely co-operative in assisting with the data collection in the initial phase. Access to classes was excellent although there was some reluctance to participate in some cases. However, after the first round of data collection, all further contact with the sample was independent of providers.

Data on 452 subjects were collected for the first phase of the study. Analyses of the data concerning language backgrounds, defining 'preferred language' as the first language, revealed that percentages for 1992 were 54 per cent English and 46 per cent non English.

Maintaining contact with the sample was a difficult task in a longitudinal study of such a mobile population. Letters with reply-paid envelopes were sent to subjects with instructions regarding change of address, but in many cases, this begs the question with literacy students and alternative methods had to be found to maintain contact. Social events were organised such as public forums in shopping centres, which encouraged participants to come and make themselves known to the research team. Lottery tickets were sent out, as were vouchers and birthday cards as a means of keeping in touch. Each person was provided with a small pocket diary in which dates relevant to the study were marked. Subjects were also invited to contact the research team if changes occurred in their living conditions, and many did so.

After the first phase, many subjects had changed their status with respect to attendance in courses. Although more than 60 per cent were still involved in education or were planning to undertake more; 37 per cent were no longer involved and had no plans for any further participation. Those enrolled in the same programs as for phase 1 comprised only 17 per cent of TAFE students, 24 per cent of the SkillShare students and 35 per cent of the other students in community, workplace, or labour market. This highlights the difficulty required to track the sample in phase 2; there was little the providers could do to assist the researchers in locating students from the previous year.

Table 3.1 presents the second phase participation rates in the same programs, in new programs and in additional programs. In some cases, a participant indicated plans for new courses even though still enrolled or already taking a new course.

Table 3.1 - Percentage Participation in Education by Type of Provider

Provider	*New*	*Same*	*Additional*
	%	%	%
TAFE	47	17	36
SkillShare	45	24	37
Other *	33	35	32

* 'Other courses' included work, community and further education

A short interview schedule was prepared focusing on the current status and plans in education, beliefs concerning the benefits of education, current status and attitudes about employment, community and social or life satisfaction.

The second round of interviews began late in October 1993. Phone calls were conducted with more than 300 participants. Very few of the initial population did not have a telephone connected. The majority of contacts were made after hours and at weekends, as this proved to be the most suitable time for participants. For those who could not be contacted by phone, considerable effort was made to establish contact. If addresses supplied in phase 1 were not current and information from providers was not available, participants were traced through inspection of electoral roles, the national compact disc version of phone directories, contact with family members and so on. This stage also established a procedure for tracing the participants more easily in the future phases of the study.

Almost exclusively, participants were pleased to be contacted and were happy to continue to participate in the study. After completing the telephone interview, the participant was sent a thank you letter and an 'instant' lottery ticket.

By the end of phase 2, only eight persons were conceded to be lost to the study. Reasons for attrition were:

1. No longer wishes to participate for personal reasons.
2. Has left the country and unable to be contacted.

In phase 3 arrangements were made for personal visits if communication problems had occurred. A small number of interviewers were trained. Each participant received the latest issue of 'Who Weekly' (donated by Time Inc.) with a notification letter of impending interview. Upon completion of the interview a thank you letter and an 'instant' lottery ticket was sent.

In phase 4 the procedure was varied: the data was collected via mailed questionnaire. This was, of course, a risk. As has been noted, to ask literacy students to complete a questionnaire entails considerable risk of non-completion because of the nature of the sample. However, extensive trials and consultation, together with instructions that assistance could be obtained gave confidence to the researchers that it was a feasible method of data collection. The coded and scannable instruments were mailed out late in 1995 (containing a pencil and a reply paid return envelope) and a Christmas hamper competition was conducted to promote

quick return of the questionnaires; each respondent then received a thank-you letter and an 'instant' lottery ticket.
Non-respondents were followed up by telephone. Approximately 60 interviews were conducted in this manner, many by second-language speakers. Twenty-nine participants needed this assistance, indicating that they had not mastered English sufficiently to respond. No conclusions were drawn regarding this group's first language literacy; however, the fact that after four years they were unable to respond first to a questionnaire and then to an interview conducted in English enabled some conclusions to be tentatively drawn about the program's impact on their lives.

Interviews were conducted until the end of March 1996. Altogether, forty-two participants could not be traced and, of these, two were overseas and nine had withdrawn from the study.

Retention Rates

Details of the number of participants at each site for each year is shown in Table 3.2.

Table 3.2 - Number of participants at each site

Site	*Phase 1*	*Phase 2*	*Phase 3*	*Phase 4*
1	11	6	6	5
2	10	8	7	7
3	12	11	12	12
4	50	31	28	20
5	19	16	16	14
6	20	17	16	14
7	14	11	11	11
8	21	18	17	14
9	24	19	18	17
10	29	24	24	17
11	5	3	3	2
12	5	4	3	2
13	20	17	14	13
14	24	18	16	13
16	14	11	11	7
17	20	11	8	4
18	17	13	11	10
19	44	38	35	29
20	14	13	13	11
21	1	0	1	1
22	5	5	4	3
23	15	13	13	11
24	17	17	15	14
25	2	2	2	2
26	1	0	1	1
27	8	8	8	8
28	13	10	10	7
29	3	3	2	2
30	2	2	2	2
31	3	3	3	2
32	9	0	0	0
Total	**452**	**352**	**330**	**275**

The retention rates shown in Table 3.3 are very high for a longitudinal study, given such a mobile population.

Table 3.3 – Retention Rates

Year	Number	Per cent of Phase 1	Per cent of Phase 2	Per cent of Phase 3	Data collection method
Phase 1 1992/3	452				Face-to-face interview November and December, 1992
Phase 2 1993/4	352	77.9			Telephone interview June to December, 1993
Phase 3 1994/5	330	73.0	93.8		Telephone interview November 1994 to April 1995
Phase 4 1995/6	275	60.8	78.1	83.3	Mail questionnaire and telephone interview December 1995 to March 1996.

The final phase represents 61 per cent of the original sample of 452. Examination of retention within strata groups revealed that there were slightly higher rates of retention for those who were employed, those whose preferred language was English and those enrolled in a course.

For the 275 people who have remained in the study for the four years, the percentage of employed participants rose each year from 23 per cent in 1992, 34 per cent in 1993 and 47 per cent in 1994 to 52 per cent in 1995. The percentage enrolled in a course gradually decreased from 100 per cent in 1992 to 73 per cent in 1993, 58 per cent in 1994 and 30 per cent in 1995. This may have been due to gaining employment and/or completion of courses.

Sample Composition over Four Years

Sample composition by gender and language breakdown has remained similar for each year of the study (see Figures 3.1 and 3.2).

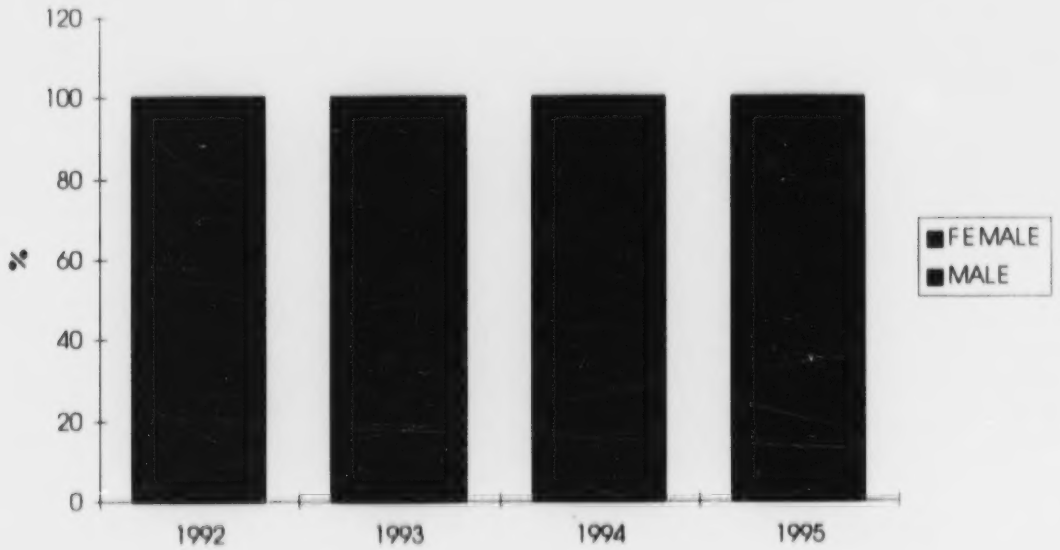

Figure 3.1 - Sample composition by gender

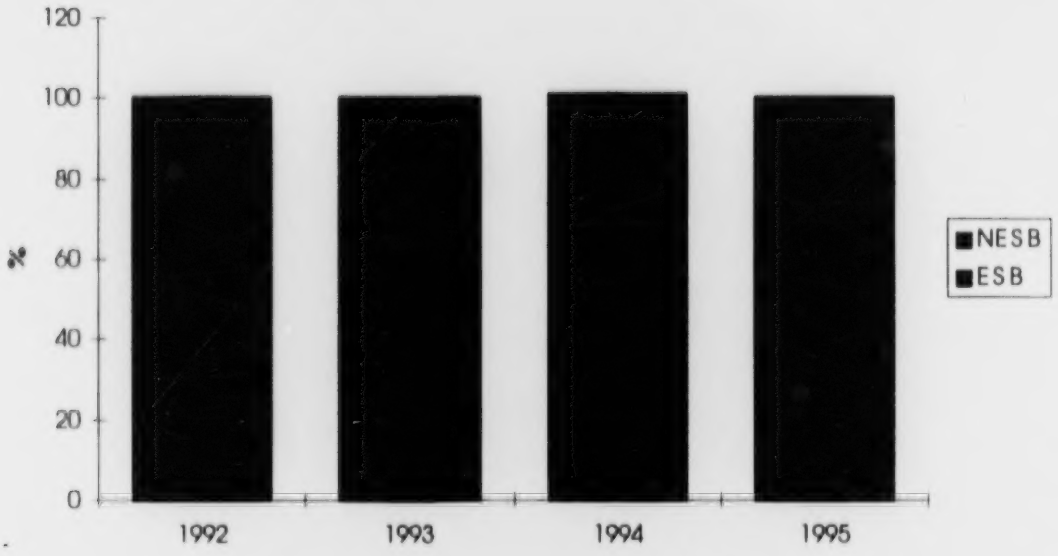

Figure 3.2 - Sample composition by language background

The sample is described in detail in Tables 3.4 and 3.5

Table 3.4 - Percentage composition of the initial sample

AGE	MALE	FEMALE	TOTAL
<20	3.4	3.4	6.8
20 - 29	16	16.2	32.2
30 - 39	17.3	15.8	33.1
40 - 49	8.7	9.8	18.5
50 - 59	5.1	2.7	7.8
60 +	1	2	3
Total	52	49	100
FIRST LANGUAGE			
Eng	19.7	20.4	40.0
Non Eng	36.3	23.7	60.0
EMPLOYMENT			
Employed	12.6	7.4	20.1
Unemployed	43.6	36.3	79.9

After the first data collection, it was evident that the gender balance of the sample was appropriate but that the employment and language-background proportion of the sample needed adjustment. To this end, additional data were collected. The additional subjects were drawn from regions where employment programs had been offered predominantly for ESB workers.

Table 3.5 - Weekly length of time in class

Hours per week	%
<4	11.4
4 - 9	25.4
10-19	29.4
20+	34.3

Figure 3.3 displays the composition by gender and language breakdown in 1995, which was similar to that of previous years. The largest section is the male English speaking background group.

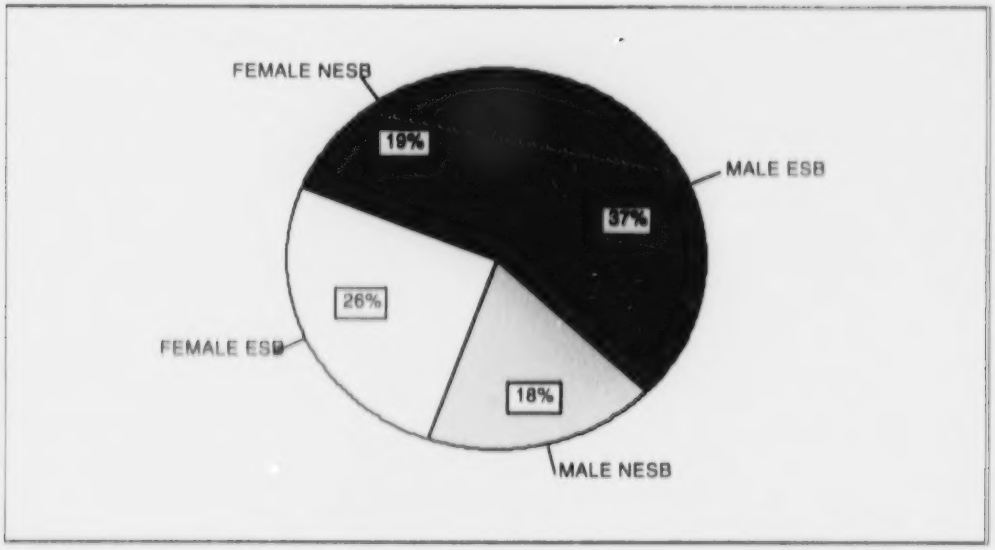

Figure 3.3 - Gender and language breakdown

Distribution of ages remained similar over the course of the study, the major group being in the 30 –39 category.

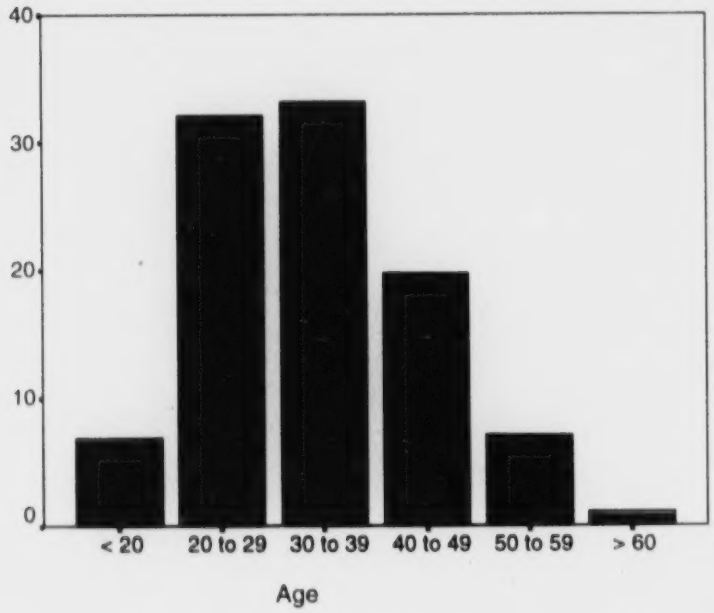

Figure 3.4 - Age distribution (per cent) in 1995

The age distribution by employment status (Figure 3.5) also shows that the largest numbers appear in the 30 - 39 group.

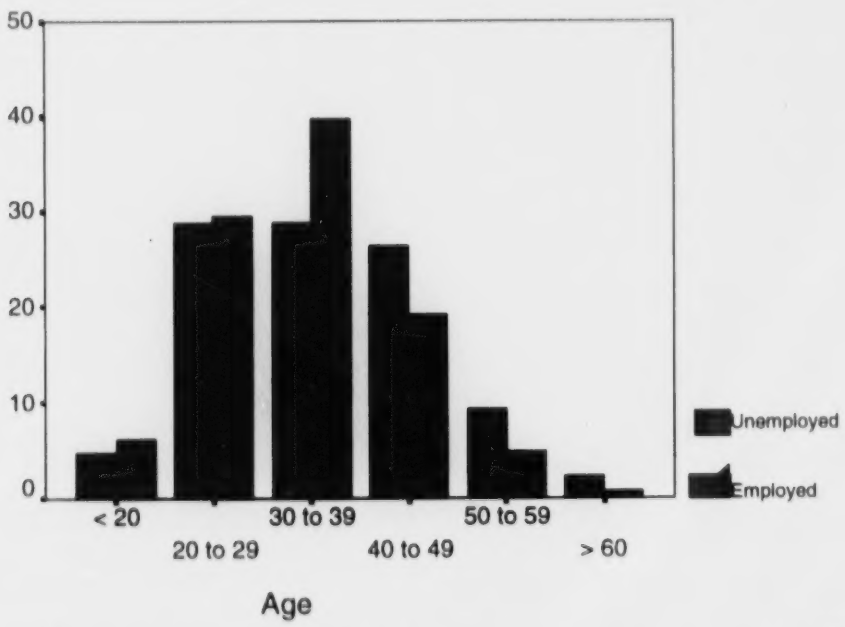

Figure 3.5 - Age distribution (per cent) by employment status in 1995

The change in composition of employed persons from 1992 to 1995 (Figure 3.6) shows that there was an increase in the proportion of NESB males and females.

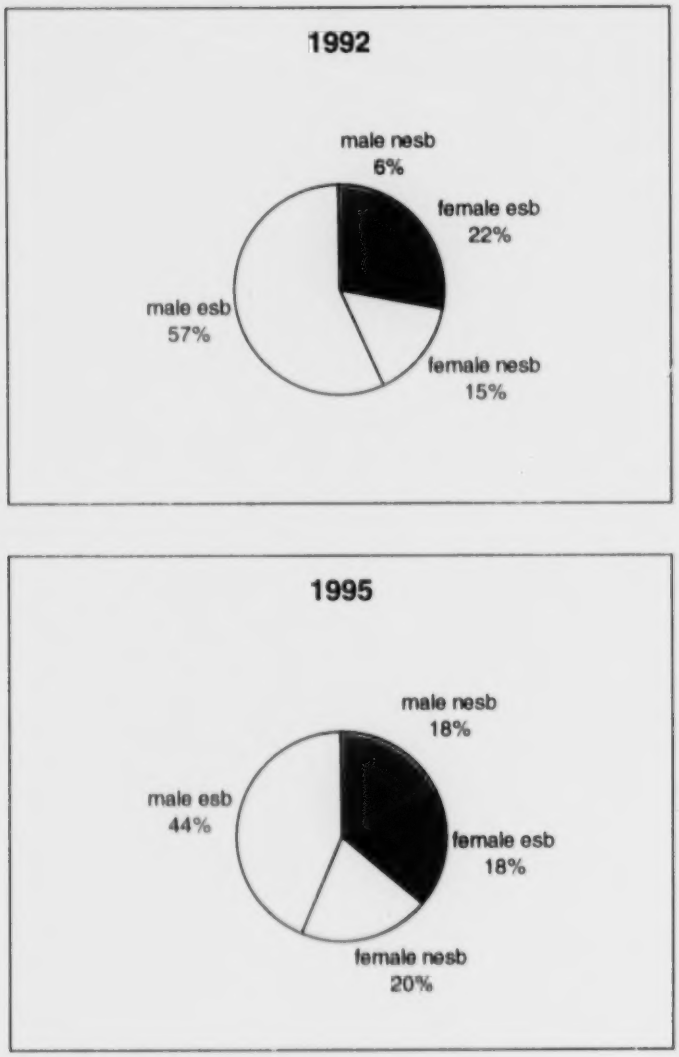

Figure 3.6 - Gender and language breakdown of employed persons in 1992 and 1995

Figures 3.7 and 3.8 show the increase in the per cent employed and the decrease in the per cent studying over the four years.

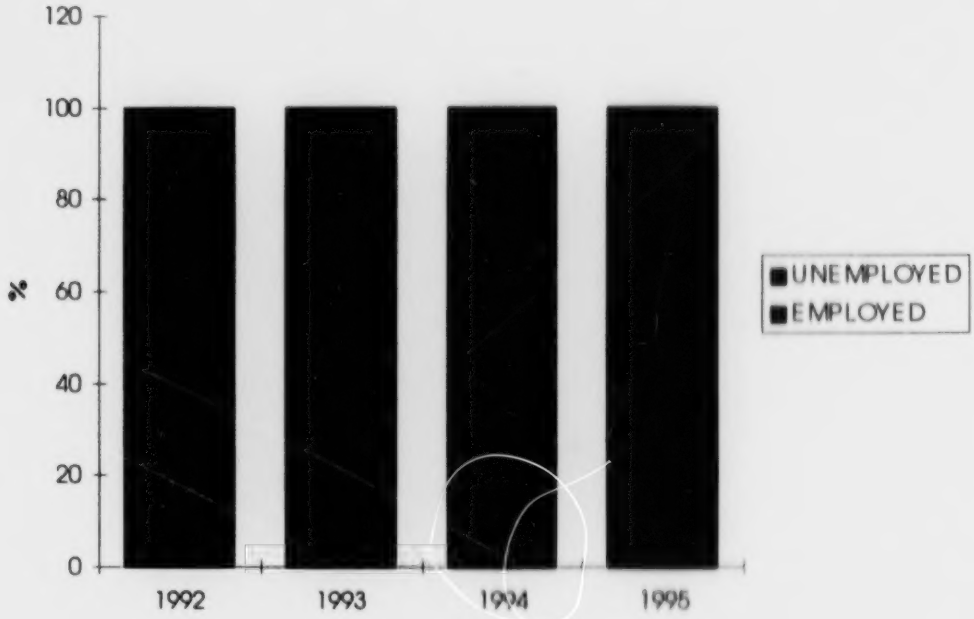

Figure 3.7 - Sample composition by employment status

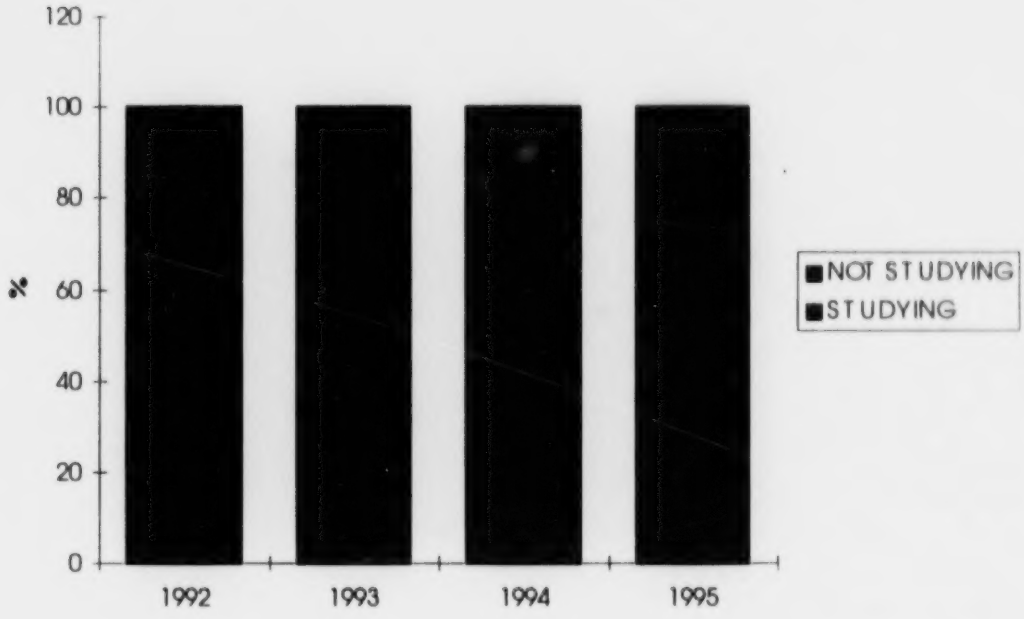

Figure 3.8 - Sample composition by course enrolment

Course participation figures were adjusted to include only those people who had been in the study over four years. A notable change occurred among the male ESB group - where enrolment increased markedly - and the female NESB - where enrolment decreased markedly (see Figure 3.9). The employment participation graph (Figure 3.6) showed the opposite, which may explain the change.

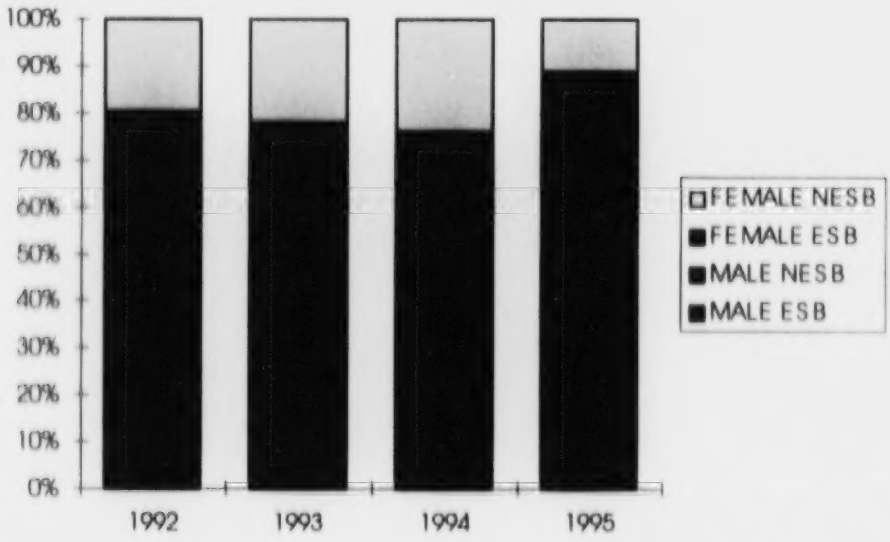

Figure 3.9 - Course participation by language and gender

Figure 3.10 shows the distribution by age, with the largest group for both enrolled and not enrolled in the 30 - 39 category.

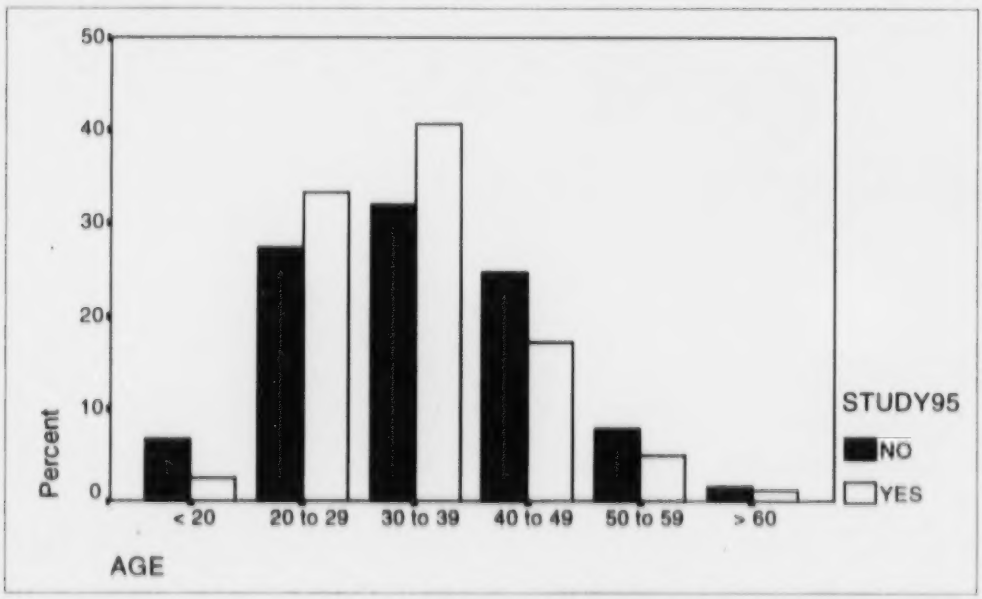

Figure 3.10 - Study involvement by age, 1995

CHAPTER 4. SCALE DEVELOPMENT

Attitudes

The purpose of this section is to provide an overview of the development and trial of instruments used to assess participants' attitudes and reactions to literacy programs, as well as their effects in the community, social life, education and employment. Changes in attitudes will serve as a guide to the program's impact on the clients' lives. Earlier investigations by REARK research (1995) indicated that 95 per cent of participants were satisfied with the programs provided; this percentage represents a global estimate of satisfaction based on a single assessment item. While single measures are often thought to be error-prone, in fact the practice of using a single item or a series of items treated as separate data points is very common. This project took an alternative approach, and illustrates a method of integrating the information gained from a series of questionnaire items.

The task was approached from the point of view that there are *levels of attitude* and that these levels may be ascribed meaning in terms of the beliefs and feelings of participants. Such an approach is argued to provide a succinct appraisal of the outcomes and impact on clients' lives, and makes possible an effective response to participants' reaction to the program.

What are Attitudes? Attitudes are constructs. Measures of attitudes are taken to mean measures of effect, feelings, values or beliefs related to each of the domains of outcome, such as employment, education, community and social activity. They serve as tools to help see order and consistency in what people do, so that given certain indicative behaviours, predictions can be made about future behaviours and dispositions. They are thus important to this study because of the need to predict participation in courses and employment, community and social activity.

Complex attitudes, such as those at the focus of this study, are difficult to measure, so the reliance on inference is unavoidable. Manifestations of beliefs, attitudes and values will not always be consistent or match, so multiple observations of the manifestations of attitude are needed to help in forming an opinion about it; this is then used to predict future dispositions and behaviours. Attitudes also change over time; hence, measuring them is like trying to measure a changing phenomenon. Attitudes are learnt, so measuring them in a learning environment exacerbates the issues. A single attitude scale may behave very differently with the same people, both in a learning environment and outside it. It is also rare that a universal interpretation of a specific attitude exists. (There are, for example, many definitions of self esteem or life satisfaction or other abstract traits.) Hence, we define a trait as it is observed through manifestations of behaviour or utterances and use evidence of those cohesive and consistent utterances and behaviours to define the trait under investigation.

Measuring and Interpreting Attitude Information

In the 1960s, two independent research developments provided a new approach to the interpretation of assessment information. Rasch (1980) developed the concept of underlying growth continua or latent traits, which led to a general development of Item Response Theory. Rasch reasoned that the nature of these traits could be defined through tasks performed or behaviours demonstrated. If the behaviours were to be arranged in order of the increasing amounts of a trait inherent in them, then the nature of the trait was defined by both the nature of the behaviours and their order. Trait development could be traced by progress along the growth continuum. In another development Glaser, (1963; 1981) defined criterion referencing as an interpretation process that...

> *'...encourage[s] the development of procedures whereby assessments of proficiency could be referred to stages along progressions of increasing competence'* (1981, p.935).]

Criterion referenced interpretation was developed and applied originally for applications associated with psychological constructs and achievement tests; however, later applications of the methodology have

included attitudes, interests and opinions. It is now generalised to a construct that can be argued to have an underlying continuum. Hence, its application to attitude assessment is appropriate.

Criterion referenced interpretation requires the identification of levels of attitude on a continuum (Glaser, 1963). The criteria need to be defined by the nature of the behaviour, not by a percentage, or the specific quote of individual persons. A number of interpretation mechanisms are then used to place specific meaning in context for each observation. Standards and benchmarks of attitude are usually based on the observer's experience, although norms do exist, albeit in an informal and intuitive fashion. For example, it is common to predict attitudes to training and to base the prediction on the age, education level, employment status or other characteristic of the group; Nickse's (1990) work on family literacy is an excellent example of this. The major purpose of attitude assessment is for the prediction of future behaviour or decision making, but the decision or result does not normally end there. Given the mostly subjective nature of attitude assessment and the lack of certainty involved in the resultant decision, it is common to check opinions and assessment with others. In fact this becomes an informal process of moderation, consequently, the process. The link to criterion referencing then occurs when comparisons are made between relative levels of attitude. This is the case even when there are only two levels (positive and negative).

The basic assumptions of criterion referenced assessment are presented below (Griffin & Smith, 1997).

1. A set of underlying continua can be constructed that describe development or growth in specific domains or traits. The continua define constructs that are measurable, and have direction and units of magnitude.
2. The continua do not exist in and of themselves, but are empirically constructed to assist in explaining observations of learnt behaviour.
3. Each continuum can be defined by a cohesive set of indicative behaviours representing levels of learning. These behaviours can be demonstrated through the performance of representative tasks or by responding to specified prompts that can be regarded as either direct or indirect indicators of the trait or attitude.
4. Not all behaviours can be directly observed. Related, indirect behaviours can be used along with directly observable behaviours to describe the attitude or trait. In this way, statements have been used as potential indicators of agreement.
5. The indicators (behaviours or statements) may be ordered along a continuum according to the amount of the trait required to agree or disagree with the statement or to demonstrate the behaviour.
6. People can be ordered along the continuum according to the behaviours or agreement to indicative statements they exhibit. In turn, the behaviours or statements provide an indication of the trait or attitude.
7. It is not necessary to identify or observe all possible behaviours, or to list all possible statements or indicators, in order to define the continuum. Any representative, cohesive sample of indicators that covers a range of levels on the continuum can define it.
8. There is not one correct sample of indicators or pointers that exclusively defines the continuum or the domain, although there may be a set of indicators that is generally agreed upon as important in defining it.
9. While the indicators used to define the continuum are related, there is no causal or dependent relationship between them. It is neither necessary nor obligatory to observe lower order indicators in order to observe higher order behaviours. The existence of higher order indicators implies the ability to demonstrate lower order indicative behaviour. The relationship is implicational or probabilistic, but not causal.
10. Progress along the continuum is monitored by the ordered accumulation of behaviours described by the indicators; that is, as an individual demonstrates behaviours in the order described in the continuum, he or she is said to be progressing along it. Progress is monitored by the positions of the behaviours or tasks on the continuum.

These assumptions strengthen potential approaches to the development of scales that can be used for systematic measurement of attitudes. The four major methods of attitude assessment are summarised here.

1. Self report involves surveys, polls, questionnaires, rating scales, logs, diaries and journals. It is appropriate when the people being studied are able to understand the questions being asked, have sufficient self awareness to provide the necessary information and are likely to answer honestly.

2. Reports of others require the use of interviews, questionnaires, logs, journals, reports, and observation schedules. They are appropriate when the people whose attitudes are to be measured, are unlikely to provide accurate information, or when information required is about how people would behave in certain circumstances. It is necessary to assume that the reporter is unbiased, presents objective information and has had the opportunity to make appropriate observations of representative behaviours.

3. Sociometric procedures involve peer ratings and social choice techniques. They are used when a picture of social patterns or groups are needed so that interrelationships within a group can be mapped.

4. Records use counsellor files, attendance records and other unobtrusive data. They are preferred when access to the data does not intrude on privacy. However, it is important to establish that the records used contain data pertinent to the attitude under investigation.

The choice of method in this project was limited given the possible literacy difficulties likely to be encountered among participants. Therefore face-to-face and telephone interviews were conducted for the first three phases. By phase 4 data collection was via a mail-out questionnaire. This was done after extensive trials and consultation and assistance and/or follow-up was provided where necessary.

Developing the Items for an Ordered Attitude Scale

The assumptions and limitations placed on instruments and their administration require the development of ordered scales consisting of a series of statements to which respondents indicate their level of agreement. Only opinions are requested; factual matters are not included. This approach makes use of a series of judges who know the construct (in this case, attitude to literacy training) and can make professional judgements as to the relative position for each statement on the continuum. A refinement of the procedure uses the Rasch scaling technique to place the items on the continuum empirically; respondents then only check those items to which they agree. This process, however, involves the development of a large number of items about the focus of the attitude.

In this project, interviews with potential respondents were used to generate the statements, which were then affirmed through examinations of the literature with particular emphasis on studies of adult literacy such as those conducted by Wickert (1989), Kirsch and Jungeblut (1985) and Jones (1991). The statements were then sorted according to the relative strength of attitude needed to agree with them - this is known as the stringency of the item. Item stringency and a person's attitude were then able to be compared directly, using item response analysis described below.

The pool of statements was also panelled by members of the research team and representatives of providers. This process identified language that was inappropriate and items that could lead to difficulties for members of the networks formed among the employers, the CES and training providers. The revised items were then trialled with program participants.

Item Response Analysis

The data from trials were analyzed using item response analysis. This identified the items forming cohesive scales that allowed participants to respond in a coherent and consistent way. Items that did not fit such a requirement of consistency were eliminated, and those remaining were used to develop the attitude measure.

The item response analysis used the Rasch (1960) partial credit model (Wright & Masters, 1982), which allows a range of scoring procedures to be used and synthesised onto a single scale, identifying scoring thresholds for each category. The theory of the analysis is as follows.

The model assumes that the probability of a particular response (agree or disagree) can be computed, given the estimate of the person's attitude and the stringency of the item.

The probability (written as π) that a person (designated by the subscript 'n'), is scored as, or responds in, category 'x' (agree or disagree) to an item (designated by the subscript 'i') is given by the equation in Figure 4.1.

$$\pi_{nix} = \frac{\exp \sum_{j=0}^{x_i} (\beta_n - \delta_{ij})}{\sum_{k=0}^{m_i} \exp \sum_{j=0}^{k} (\beta_n - \delta_{ij})}$$

Figure 4.1 The Rasch Measurement Model

In this equation, x can take the values 0 or 1 according to whether the respondent agreed or disagreed. That is, m_i (the number of rating categories ... 2 in this case) corresponds to $m_i + 1$ number of ordered categories associated with item i (disagree, undecided and agree). The symbol β_n represents the strength of attitude of the person, n, and δ_{i1}, δ_{i2}, δ_{i3}, δ_{i4}, .., δ_{im}, are the attitude stringency measures associated with the ratings 0, 1 or 2 for each item i or the item thresholds on continuum i.

The data was analyzed using the QUEST program (Adams & Khoo, 1993). Details of all scale properties are included in the project manual of Corneille & Griffin (1994). Summaries only are presented here.

Literacy and Numeracy Activity, Sociability and Community Attitudes

Studies by Wickert (1989), Kirsch and Jungeblut (1986) and Canada 2000 (1988) identified a range of text based materials that are commonly encountered by adults. These materials were used in this study as part of a checklist administered to the survey respondents. The cohesiveness of the elements of the checklist was examined to see if a general literacy activity scale could be formed. The lists included items pertaining to the workplace, but it was suspected that the number of unemployed people in the study would make the initial interpretation of a literacy activity scale problematic. In each case, however, the literacy and numeracy activities of the respondents were shown to form a scale from which it was possible to identify generic levels of these two activities rather than to examine the potentially infinite number of specific activities. The following figures present the results for four areas of concern: literacy, numeracy, community and self-esteem. They illustrate:

- the level of activity associated with each item; and
- the distribution of the activity level for three variables; gender, language background and employment status.

In assessing literacy activity, the respondents were asked to indicate the materials they had read in the previous six months. The placement of the item on the scale is illustrated in the variable map in Figure 4.2; persons at the top of the scale are those who read the most items and those at the bottom read the least. There is an implicational relationship among the items.

The reading activity scale was expected to be affected by employment status, but further analyses conducted for both employed and unemployed groups showed that this was not so. The items were relatively invariant for the two groups, so neither separate analyses nor item omissions were seen to be warranted.

The Reading Activity Scale

LOGIT	PERSONS	ITEM NUMBER	READING ACTIVITY
4.0	XX		
3.0	XXXXX		
	XXXXXXXXX	6	Newsletters, memos,
		17	
2.0		9	Technical reports
	XXXXXXXXXXX		
	XXXXXXXXXXXXX		
1.0	XXXXXXXXXXXXXX		
		10	Manuals
	XXXXXXXXXXXXXXXXXXXXX	14	Order forms
0.0	XXXXXXXXXXXX	4 16	Health warnings, instructions
		15	Computer screens. ATM's
	XXXXXXXXXXXX	1	Personal letters
	XXXXXX	11	Catalogues
-1.0	XXXXXXX	7	Timetables, Notices
	XXXXX	13	Labels
	XXXXXXX	8	Brochures, Junk Mail
-2.0	XXXX	5 12	Street Directory, Bills
	X		
-3.0			
	X		
-4.0			

Mean 9.3 Median 10.0 Std Dev 3.7 Reliability of estimate 0.99

Figure 4.2 - The reading activity variable map

This scale is consistent with previous similar scales measuring workplace numeracy and literacy; Griffin and Santana (1992) reported an almost identical scale on the building and construction industry. The sequence in the variable map represents a change from basic data to personal, informational, procedural and technical. When considered in the light of Griffin and Santana's data, this also represents a progression of competence and has implications for workplace literacy programs. Only a minority of workers read procedures, but all read personal information. Hence, an oral culture is needed for delivery of procedures.

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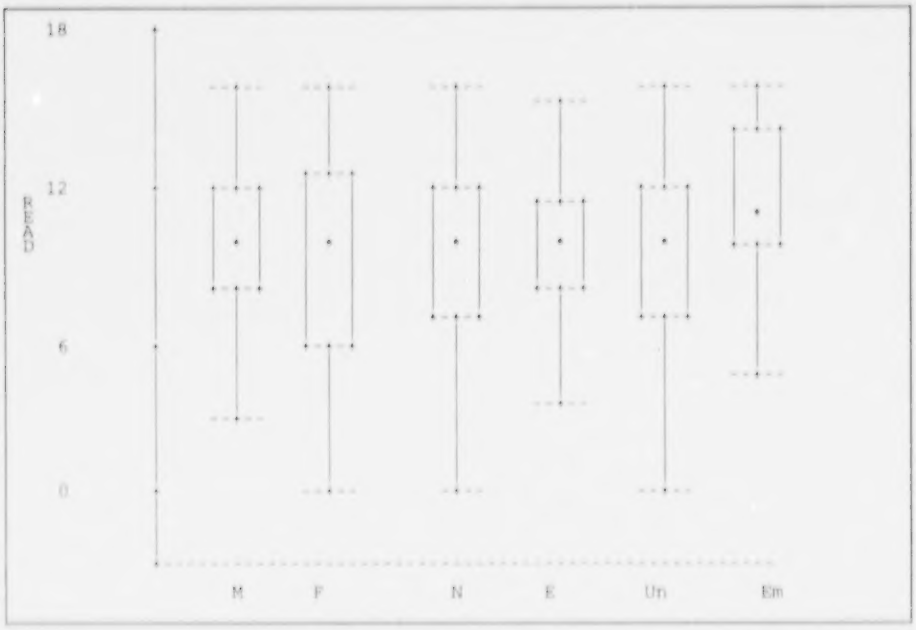
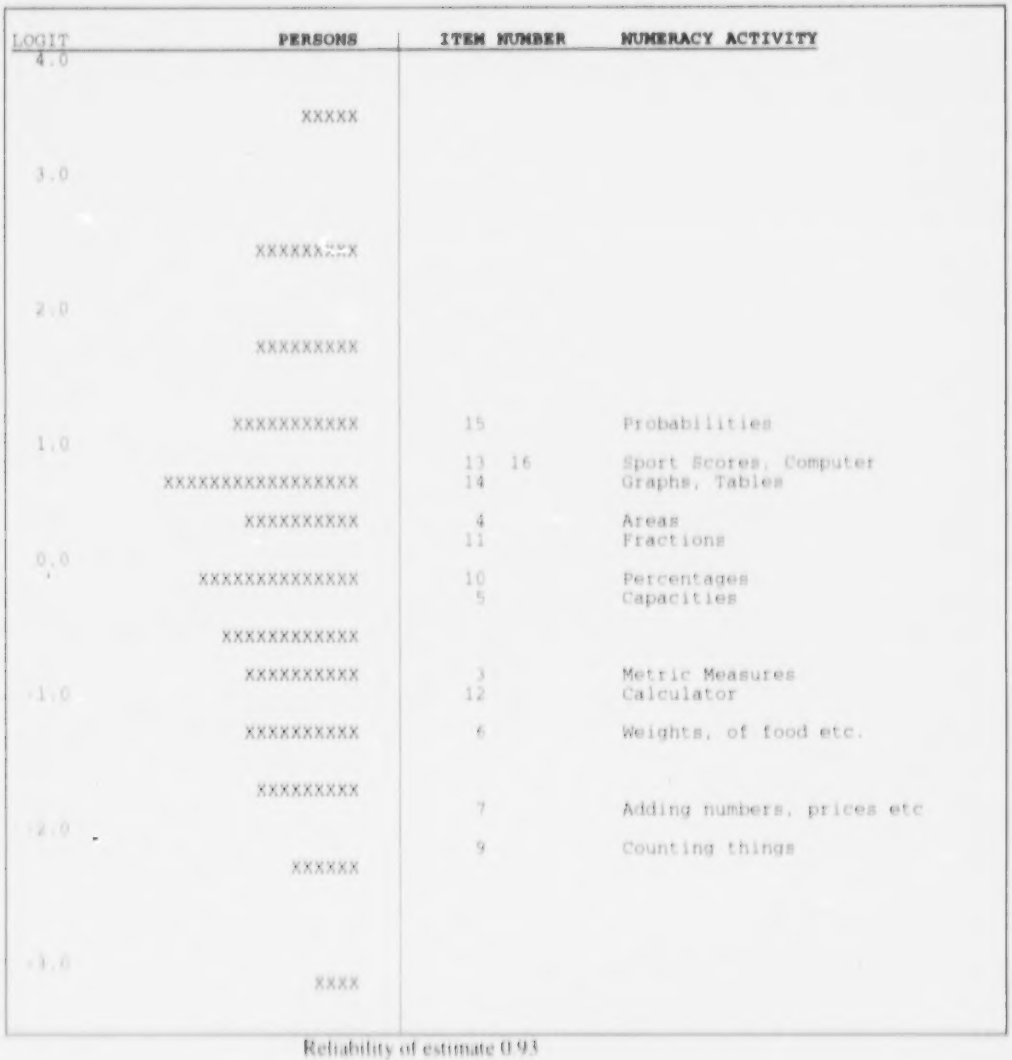


Figure 4.3 - Distribution of reading activity by gender, language and employment

There is little variation in reading activity between groups. The most noticeable effect is the 'floor' effect for the female, non-English preferred and unemployed group - which has the lowest extremes and the greatest potential for improvement.

The Numeracy Activity Scale



Reliability of estimate 0.93

Figure 4.4 - The numeracy activity variable map.

The trend in this scale depicts a transition from number through measures and fractions and then to chance and data manipulation. This is also consistent with Willis' (1990) emerging model of adult numeracy.

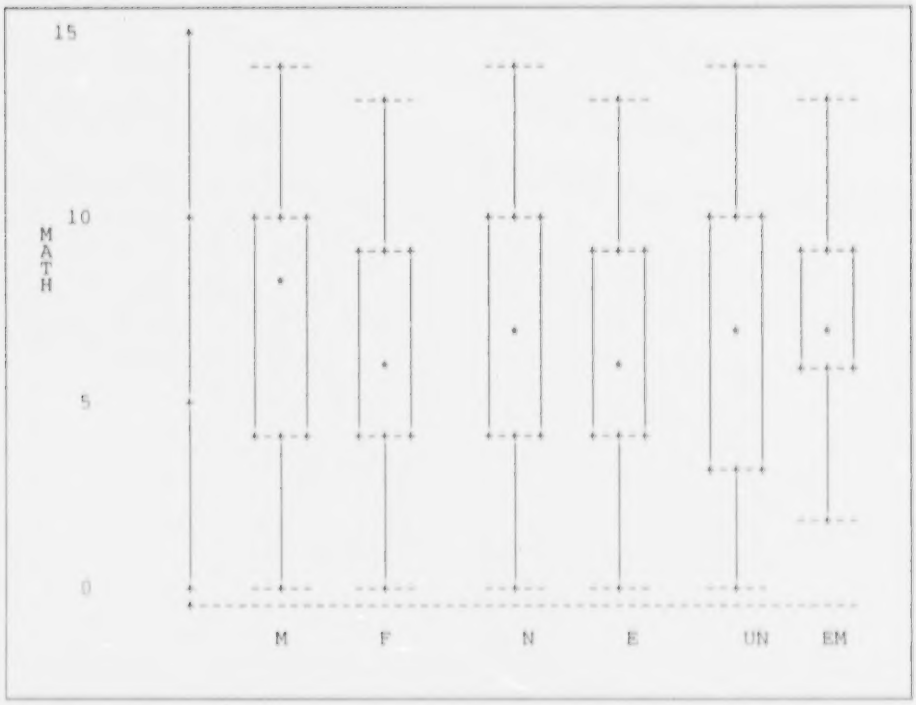


Figure 4.5 - Distribution of numeracy activity by gender, language and employment

In contrast to reading activities, the numeracy floor effect is evident for all groups. The overall weakness of numeracy enables the greatest improvement to be made in this area. Adults usually are aware of this need, but in general it is not well addressed.

The Sociability Scale

The measure of sociability was adapted from the Coppersmith Inventory and other self-esteem scales. Latent trait analysis has enabled a much shorter version of the scale to be developed without loss of reliability. The variable map is only detailed at the extremes of the scale. Given the use of a Likert scale, the partial scores assigned to responses are not interpreted directly in Figure 4.6.

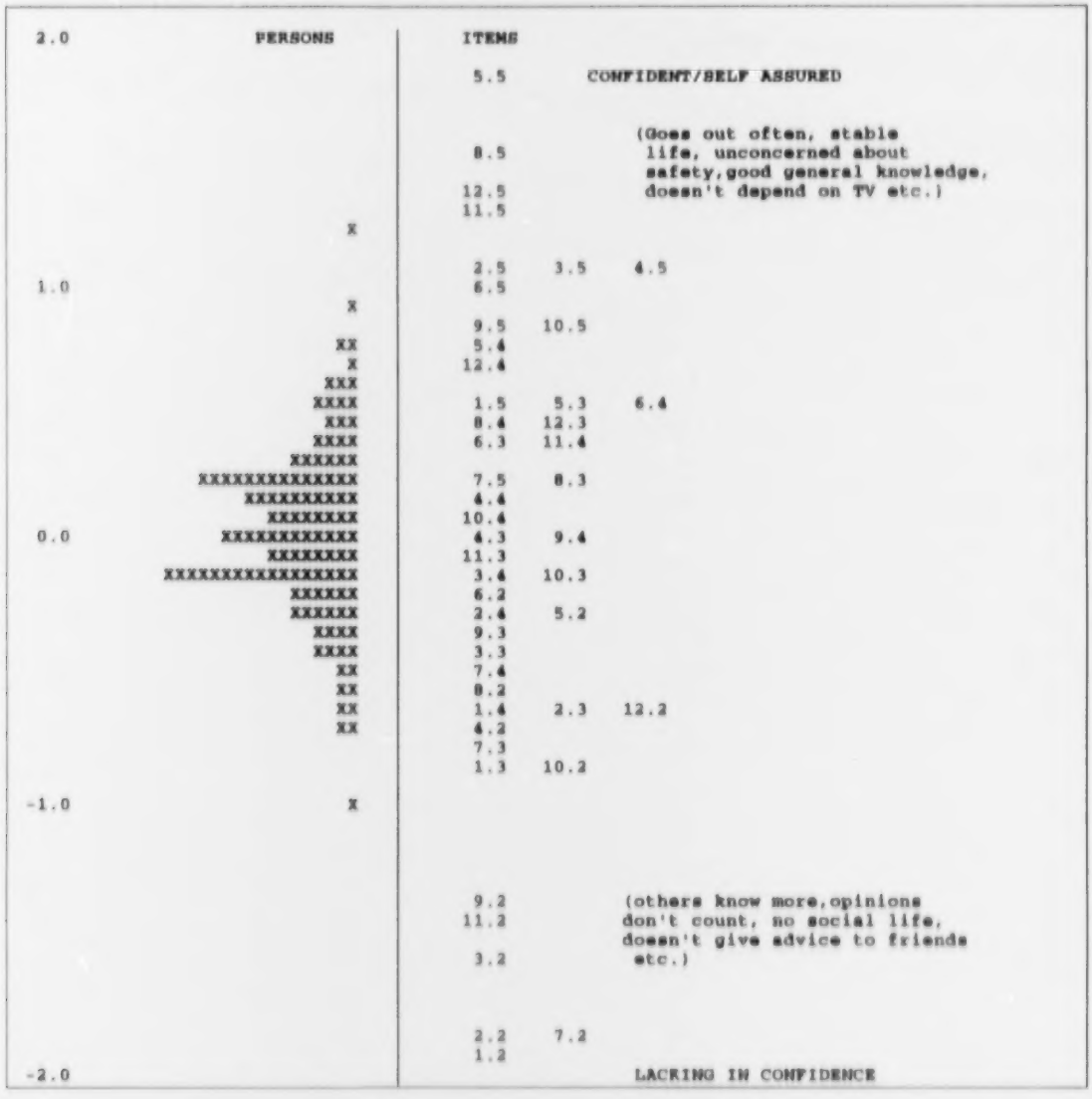


Figure 4.6 - The sociability variable map

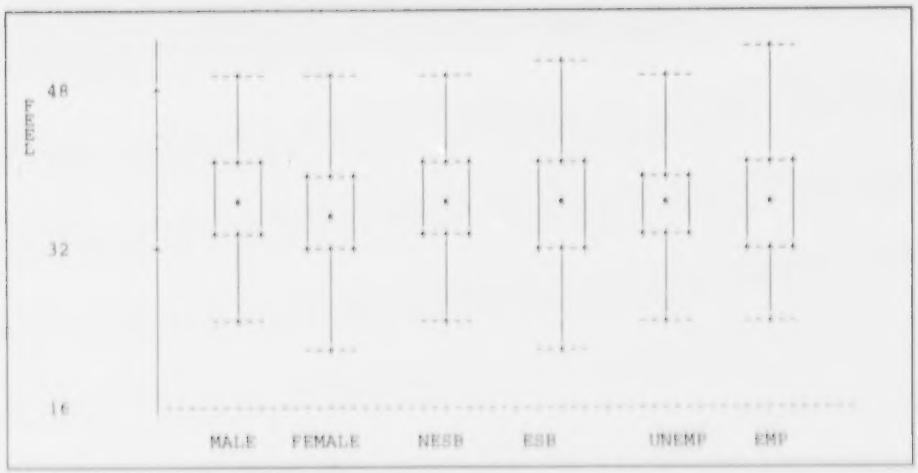
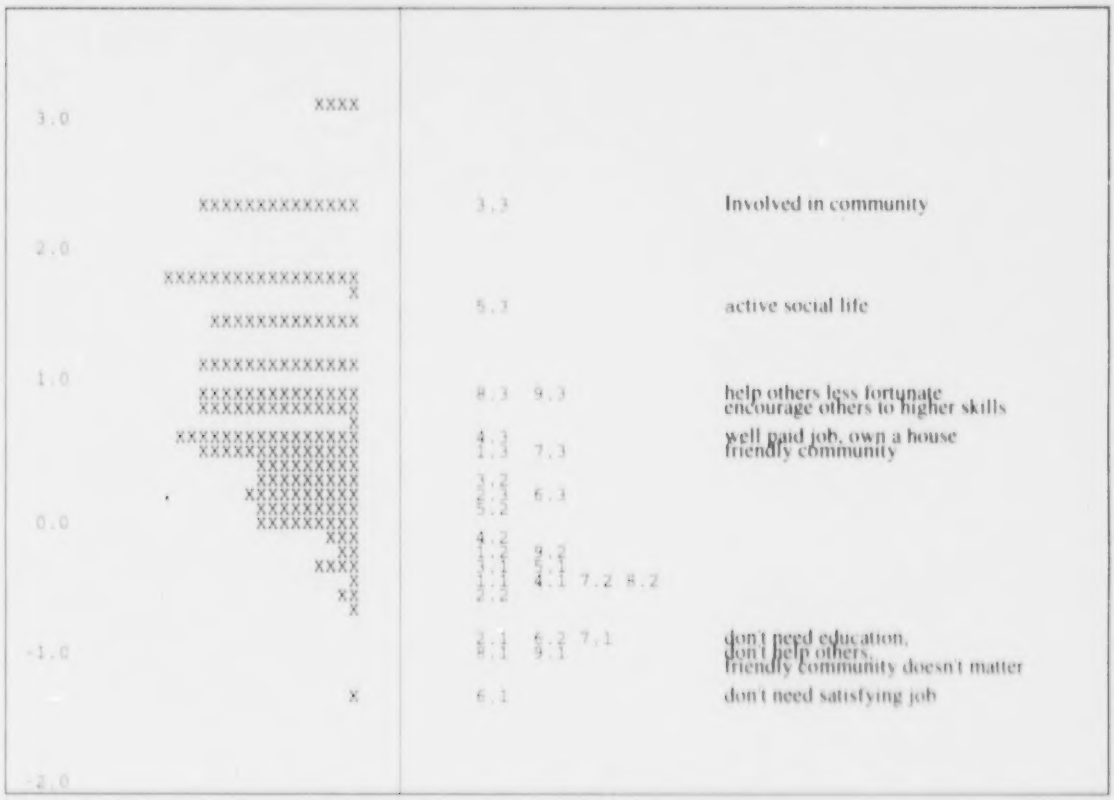


Figure 4.7 - Distribution of sociability by gender, language and employment

Sociability by gender, language and employment shows no substantial differences between groups, but greater variability in the female, English speaking and employed groups.

The Community Activity Scale

The items scaled to a single dimension measuring the individual attitude towards being involved in community and becoming a part of the social mores. The scale addresses home ownership, education, community involvement, employment, social life and neighbourliness and reports both activity levels and feelings about involvement. As with other scales the interpretation of the variable is assisted by the analysis of the variable map.



Mean 22.7 Std Dev 4.8 Reliability of estimate 0.67

Figure 4.8 - The community attitude variable map

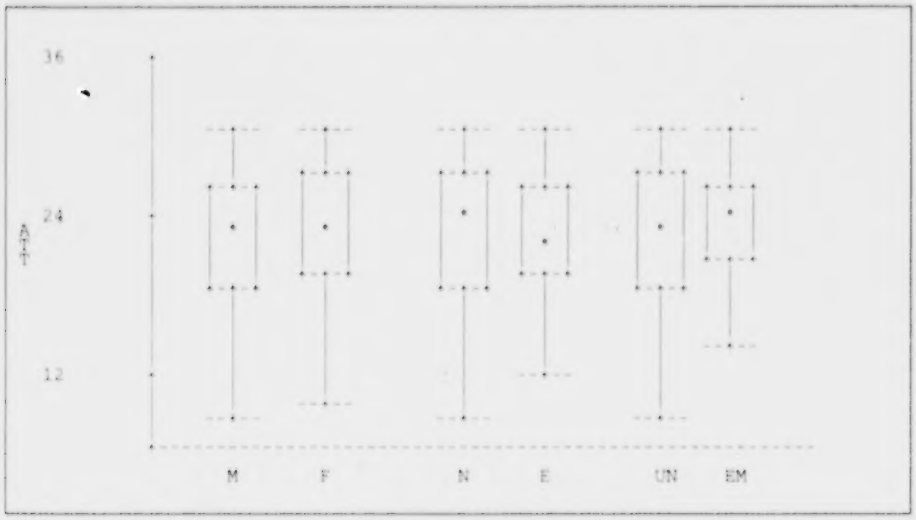


Figure 4.9 - Distribution of community attitude and activities by gender, language and employment

NESB adults appear to have more positive attitudes towards community than do their English speaking counterparts, and employed persons have more positive attitudes than the unemployed. Gender does not appear to affect attitudes or activities to the community.

The Employment Activity Scale

A scale of employment activity was developed using responses given to items such as promotion, increase in skills/demands and opportunity for courses. The ordering of the items on this scale indicates the likelihood that once new skills are learnt, a job can be more satisfying and can even lead to promotion opportunities. This is also consistent with the SIP study scale (Corcoran et al, 1996).

Figure 4.10 The employment activity variable map

Figure 4.11 compares the ranking of the common items over the two years. Clear changes have occurred with a positive shift from one year to another, which indicates more activity, positive experiences and opportunities.

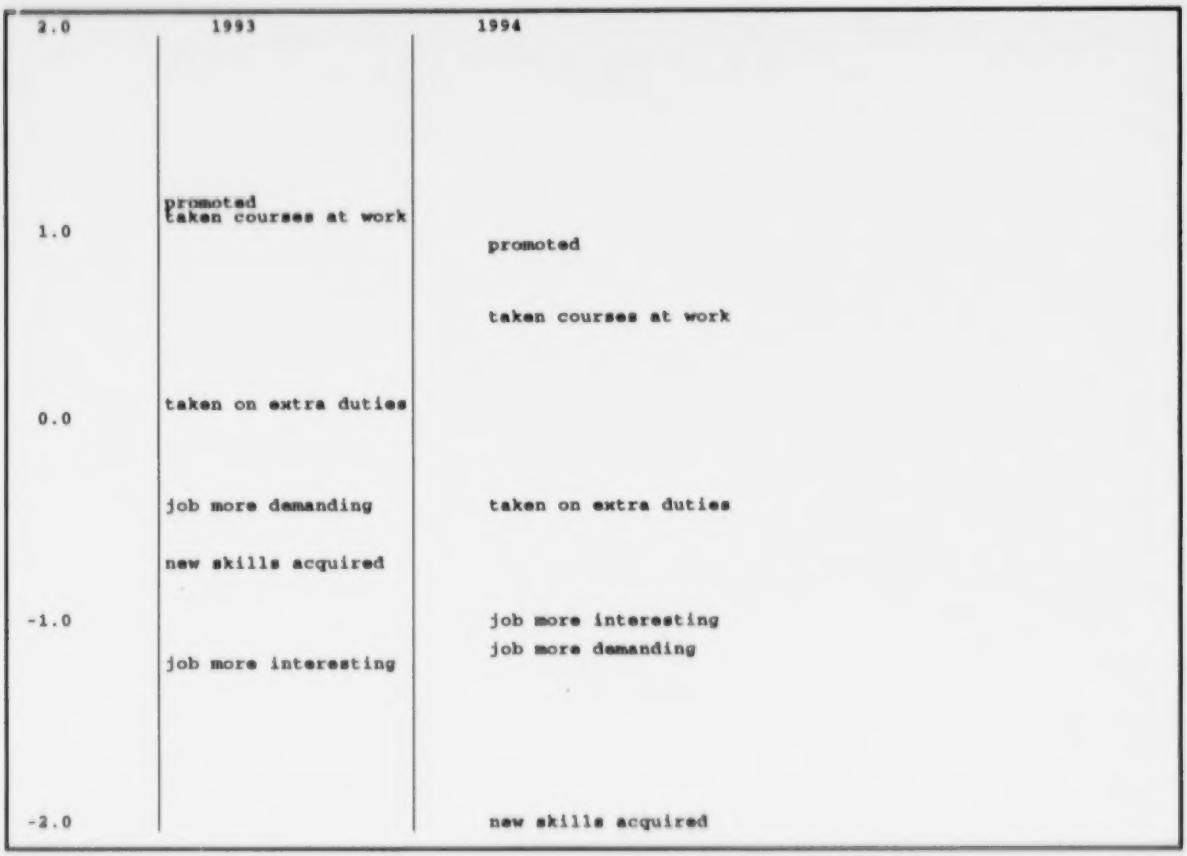


Figure 4.11 – Employment activity changes 1993-1994

The Effect of the Literacy Course Attitude (Workplace) Scale

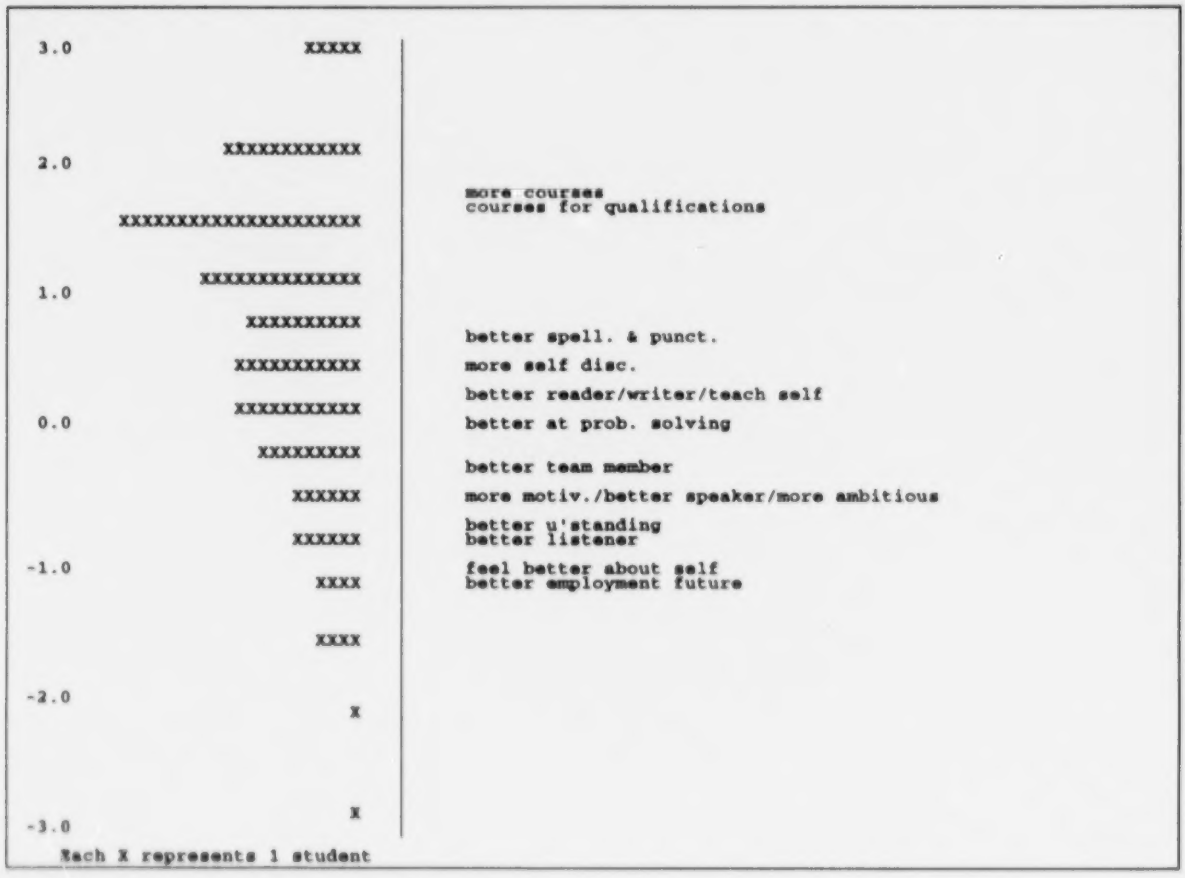


Figure 4.12 – Effect of literacy course attitude (workplace) variable map

Figure 4.12 illustrates a progression from a self focus (feel better about self), which almost all participants exhibited, to a more outgoing preparedness to pursue further education or training. It is of interest that in the work context, literacy program participation had the potential to encourage further training, and that this was a higher order outcome than team work or other work related activities.

The Effect of the Literacy Course Attitude (Education Context) Scale

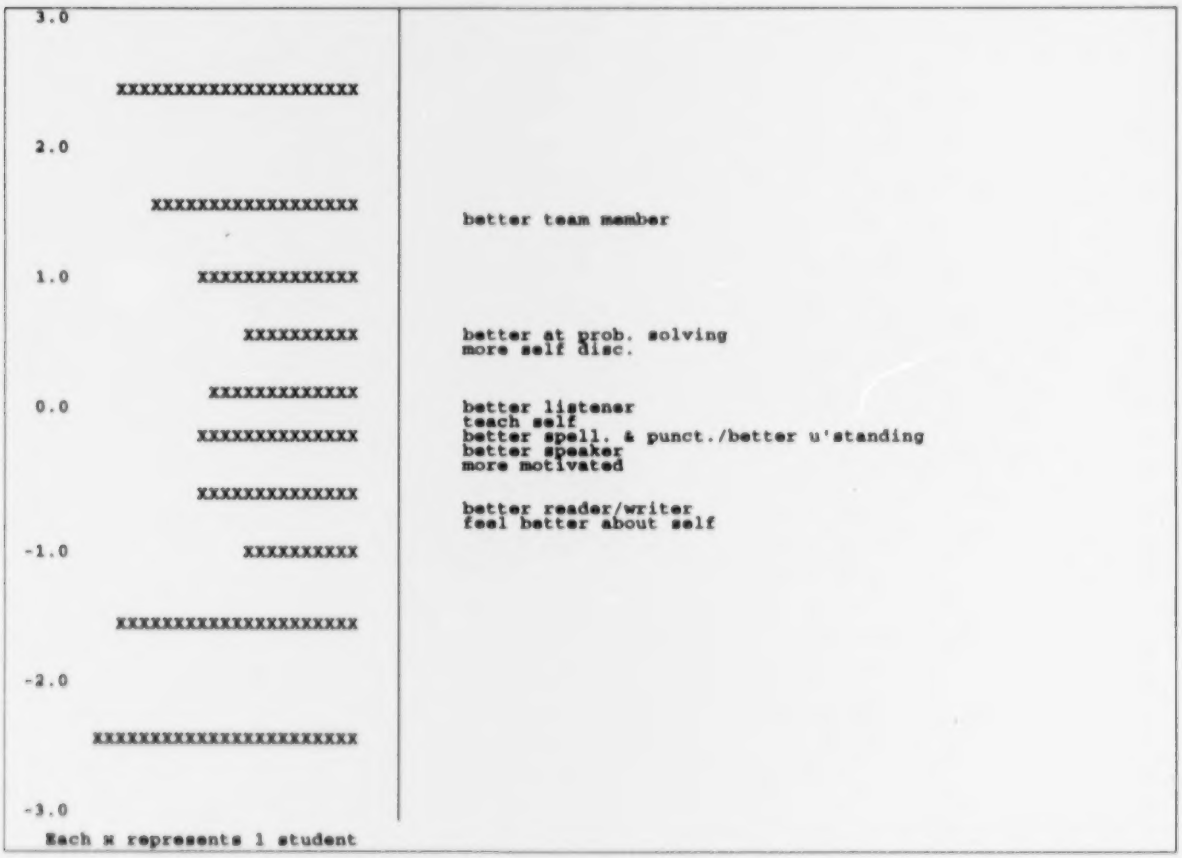


Figure 4.13 – Effect of literacy course attitude (education context) variable map

The effect of courses attitude relating to the education context also provides a scale on which change can be monitored. Figure 4.13 shows a progression from a better self-image to a better learner and a better community and team member, perhaps reflecting the more social aspects of classroom activities.

The Effect of the Literacy Course Attitude (Community Context) Scale

Figure 4.14 – Effect of literacy course attitude (community context) variable map

This scale was developed using the 1994 phase 3 data. It shows the effects after two years of the study. There is a progression from better self-image to better learner, greater cognitive skills in dealing with the community, better community and team spirit and, finally, more eagerness to learn.

The Effect of the Literacy Course Attitude (Household Context) Scale

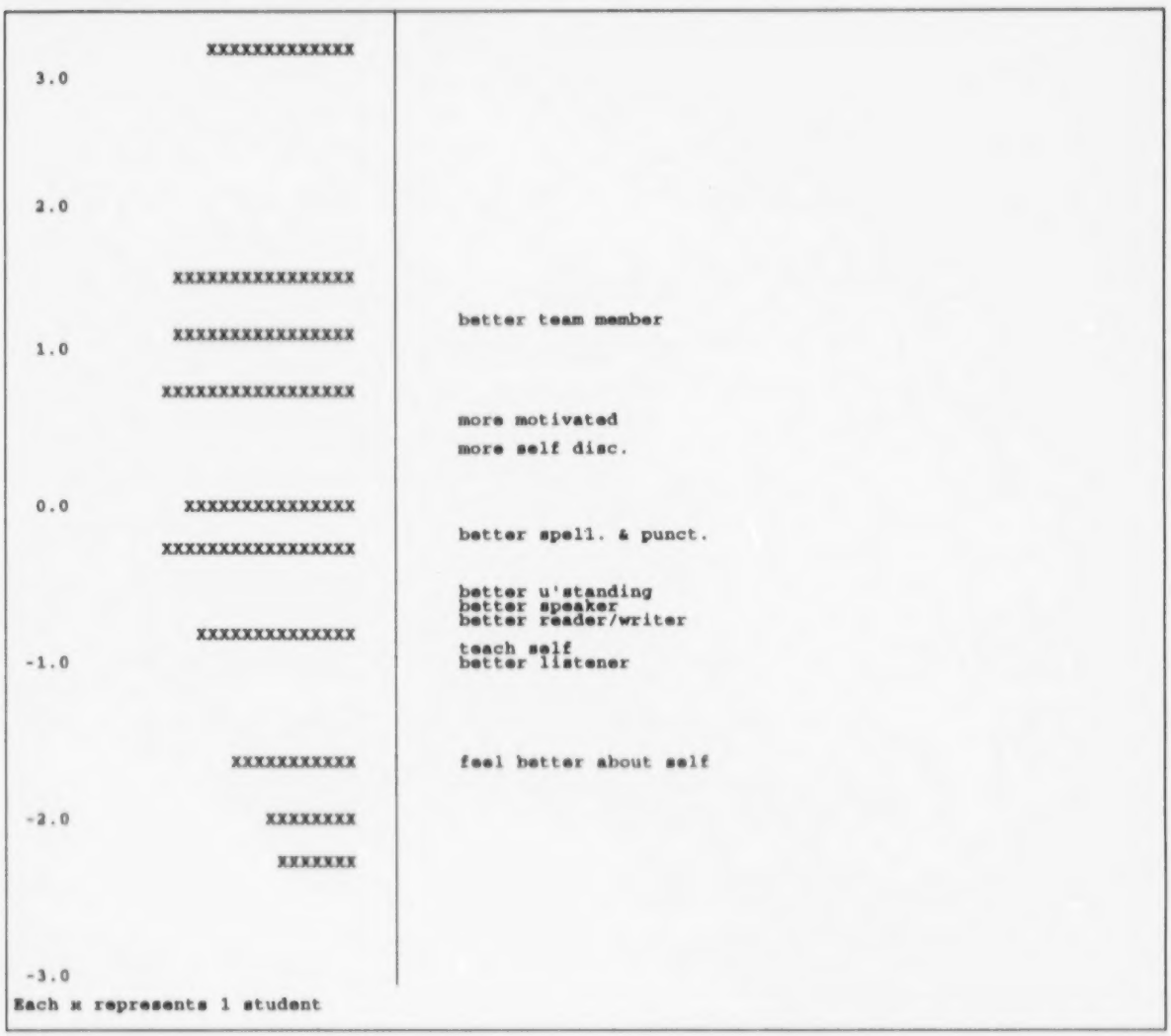


Figure 4.15 – Effect of literacy course attitude (household context) variable map

The home effect showed the same sequence, but this scale leads to a more committed team (family) member. What no study has examined is the effect on other family members.

The Functional Literacy Activity (Workplace) Scale

Figure 4.16 – Functional literacy activity (workplace) variable map

Figure 4.16 shows the progression from personal writing to use of materials and appliances and to helping others. A potentially disturbing result may be drawn from the large numbers of people (represented in the histogram on the left) who do not read any of the materials listed; this supports the result presented in Figure 4.2, the reading activity variable map. Many individuals in the workplace do not read and this has serious implications for the transmission of information.

The Functional Literacy Activity (Education context) Scale

Figure 4.17 – Functional literacy activity (education context) variable map

The education scale has a much less compact progression. Interestingly, the use of a computer is most common and basic materials are affected least, and this may reflect the increasing use of such equipment in classes, libraries and so on. At the top of the scale, few participants indicated that their classes had led to more confidence in helping themselves and others in reading activities. Similar results were reported by Corcoran et al (1996).

The Functional Literacy Activity (Community context) Scale

Figure 4.18 – Functional literacy activity (community context) variable map

The most commonly encountered literacy devices in the community are the ATM and street directions. Figure 4.18 emphasizes the orientation of the ABE curriculum. In the community context, the most common functional literacy activities involve use of community areas and facilities; the least common involve helping others in literacy related activities.

The Functional Literacy Activity (Household context) Scale

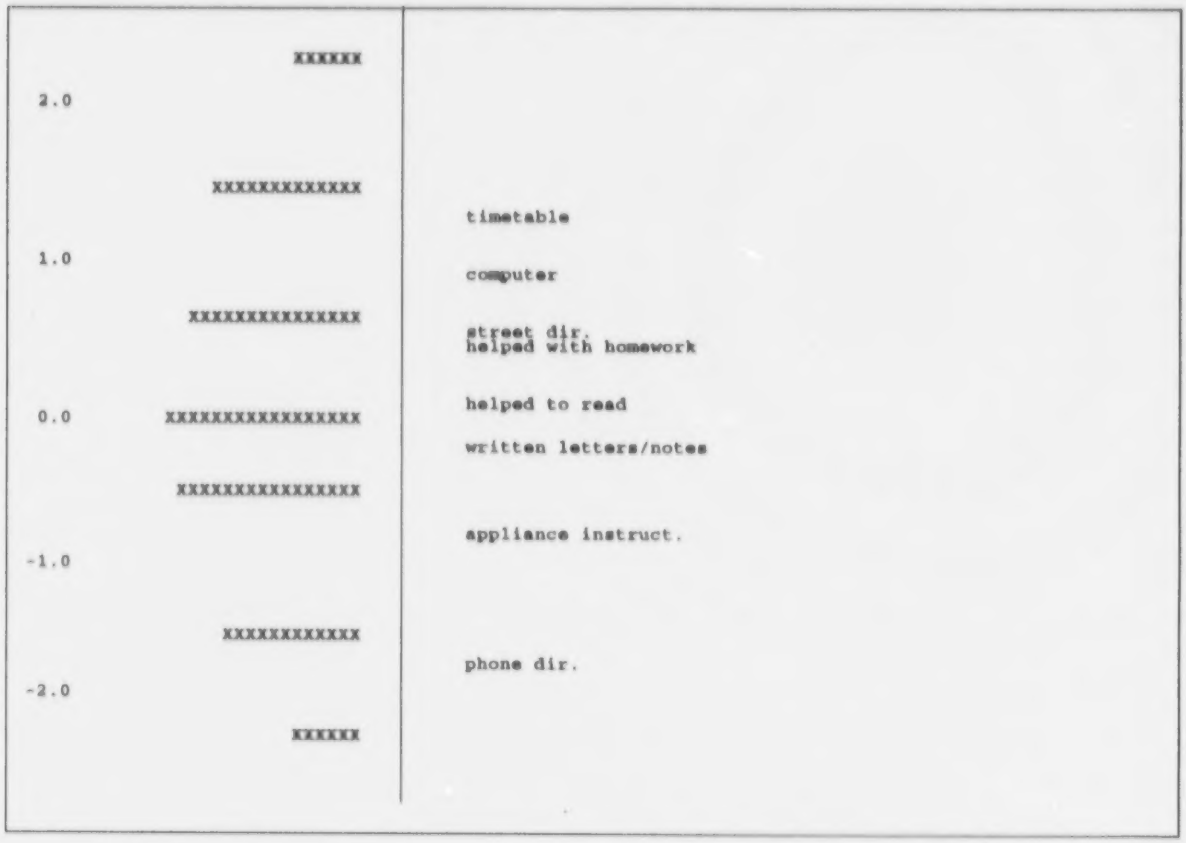


Figure 4.19 - Functional literacy activity (household context) variable map

Once again, the scale illustrates immediate impacts in the home. The use of home appliances and materials are a starting point. The least common application appears to be the more technical materials and appliances, timetables, and materials more oriented to the applications outside the home.

The Community Activity Scale

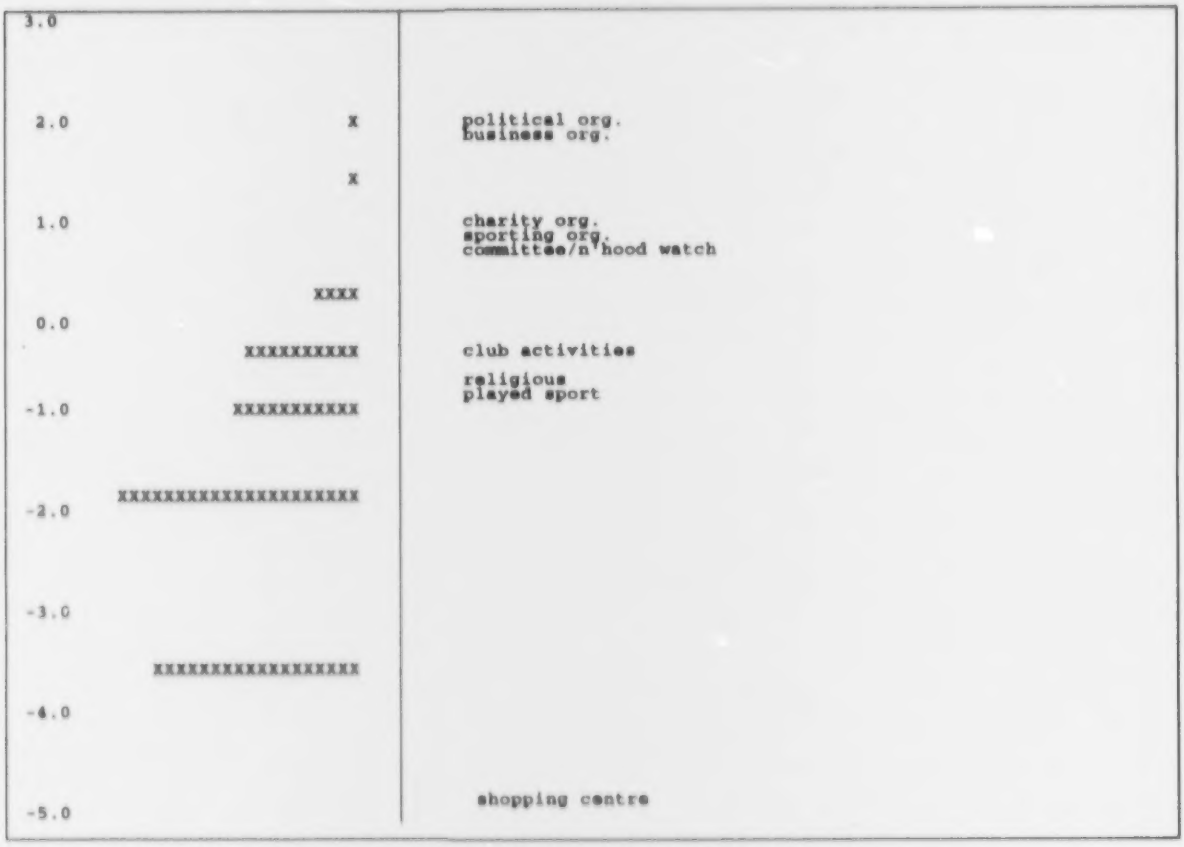


Figure 4.20 - Community activity variable map

Changes in community activities were an indication of the socialisation of participants; predictably ranging from shopping, recreation, citizenship to political activity. Very few participated in external organisations, but the progression can be identified.

The Sociability (Workplace) Scale

Figure 4.21 – Sociability (workplace) variable map

In the workplace, there is a developmental progression from a sense of worth to confidence in being outspoken, being more outgoing and sociable. Changes in sociability therefore can be interpreted in this framework.

The Sociability (Education context) Scale

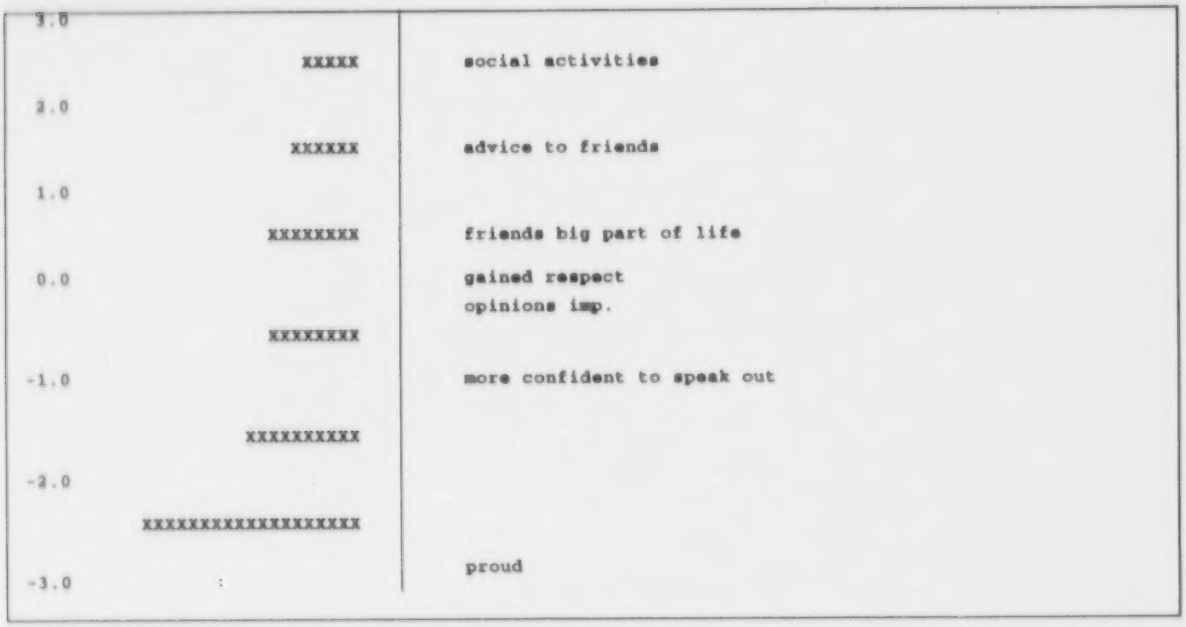


Figure 4.22 - Sociability (education context) variable map

The similarity between work and education contexts is striking. The developmental progression indicated a change in confidence, self-esteem and sociability. The social activity at the top of the scale again reinforces the nature of the class groups.

The Sociability (Community context) Scale

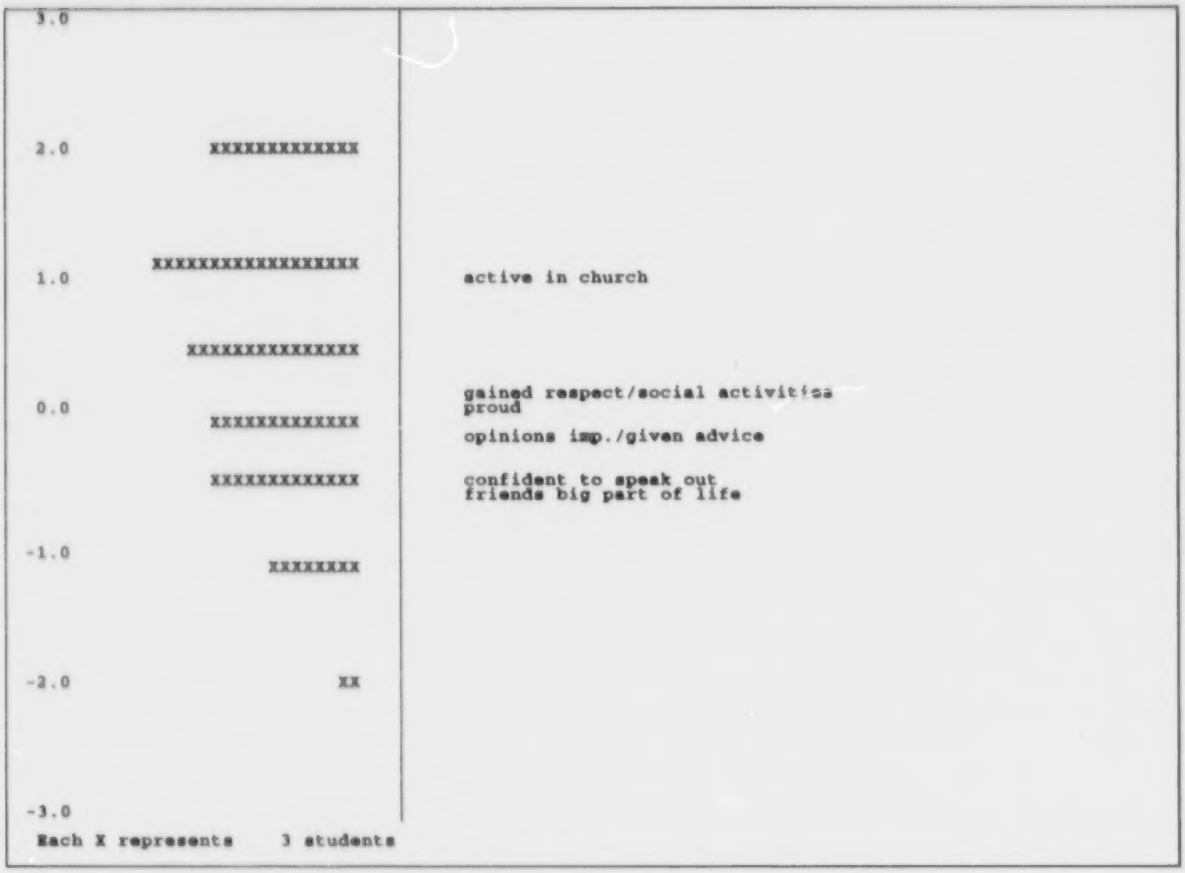


Figure 4.23 - Sociability (community context) variable map

Effects of the course on community activities are not so clear cut in their interpretation. Basic to the development is the social confidence and support of friends to become more outgoing, and then to move to politics and religious affiliations. Again the progression in activity depicted in the scale means that changes in sociability over the period of the study can be directly interpreted in terms of the progression in social activity.

The Sociability (Household context) Scale

Figure 4.24 - Sociability (community context) variable map

The sociability (home context) scale shows a clear progression basically leading out of the home and seeking entertainment in the community.

CHAPTER 5. CHANGES IN PARTICIPANTS

Employment Activity

In order to identify change in employment activity between 1993 and 1994, the responses of the same group of people to similar items were examined for each year. Results revealed an upward trend, indicating more activity and a positive outlook. Figure 5.1 demonstrates the shift.

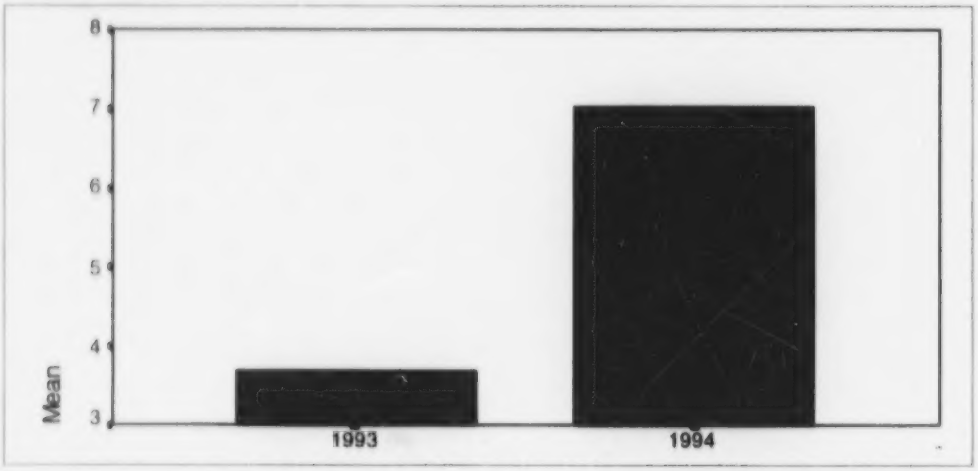


Figure 5.1 - Employment activity (mean scores) 1993 & 1994

Effect Of Course Perceptions

Those still enrolled in a course had a significantly ($t = 3.47$, $\propto < 0.05$) more positive view of the effect of their 1992 literacy course.

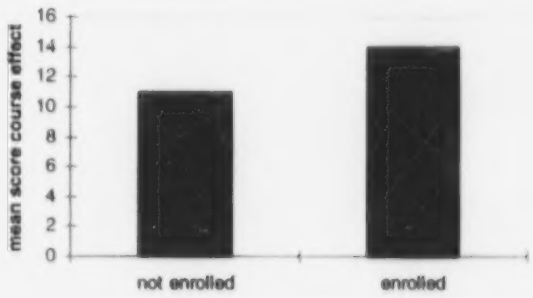


Figure 5.2 - Effect of course perceptions by current enrolment status

Figure 5.3 shows that the highest positive view of the effect of the 1992 literacy course was felt by the employed and enrolled group.

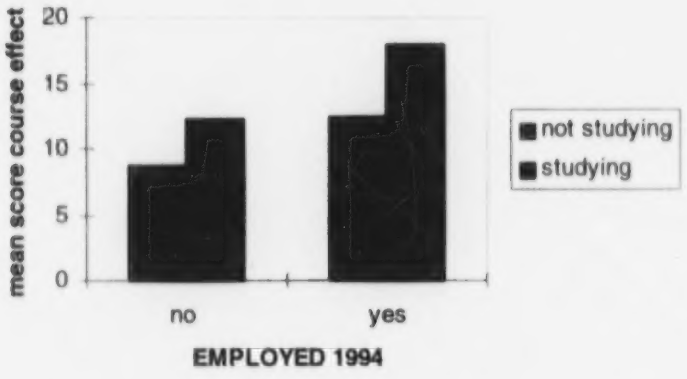


Figure 5.3 – Effect of 1992 literacy course on employed and enrolled group

There was also a significant difference ($t = 2.32$, $\propto < 0.05$) in the mean score by language background, with those with an English-speaking preference having a more positive view.

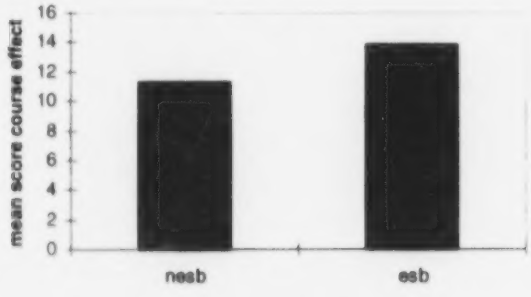


Figure 5.4 – Effect of 1992 literacy course according to language background

People with an English speaking preference also had a significantly higher positive view ($t = -3.4$, $\propto < 0.05$) as to the effect of the 1992 literacy course in the household context.

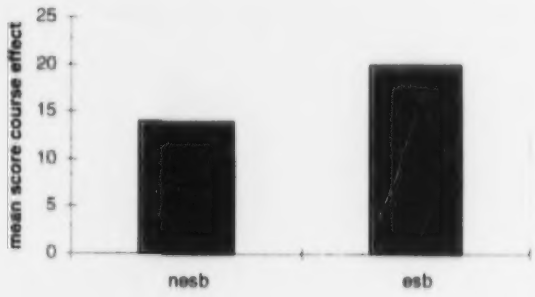


Figure 5.5 - Effect of 1992 literacy course (household context) according to language background

There also was a significant level of interaction ($\propto = .035$) by gender and language background; hence, they jointly influenced the course effect (household context) score (see Figure 5.6).

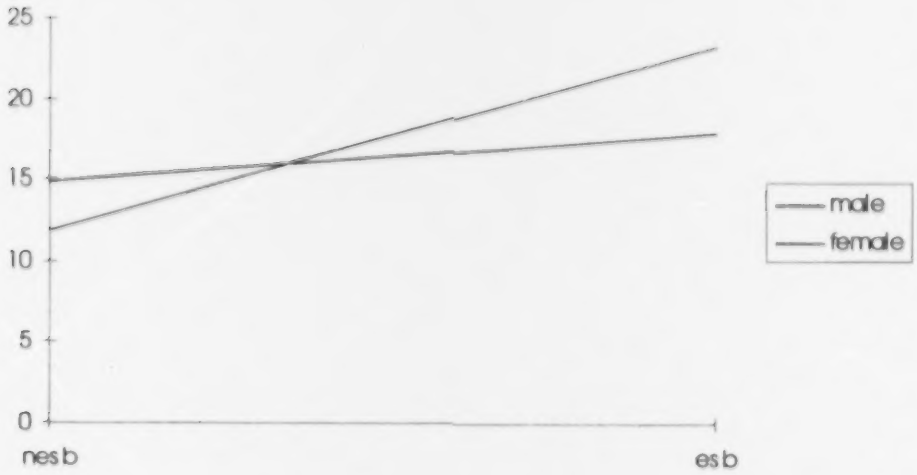


Figure 5.6 – Mean scores of course effect by gender and language background

Functional Literacy Activity

In order to find any change in functional literacy activity between 1993 and 1994, it was necessary to examine the responses to similar items by one group of people in each year. Results reveal an upward trend, with 1994 responses indicating more activity.

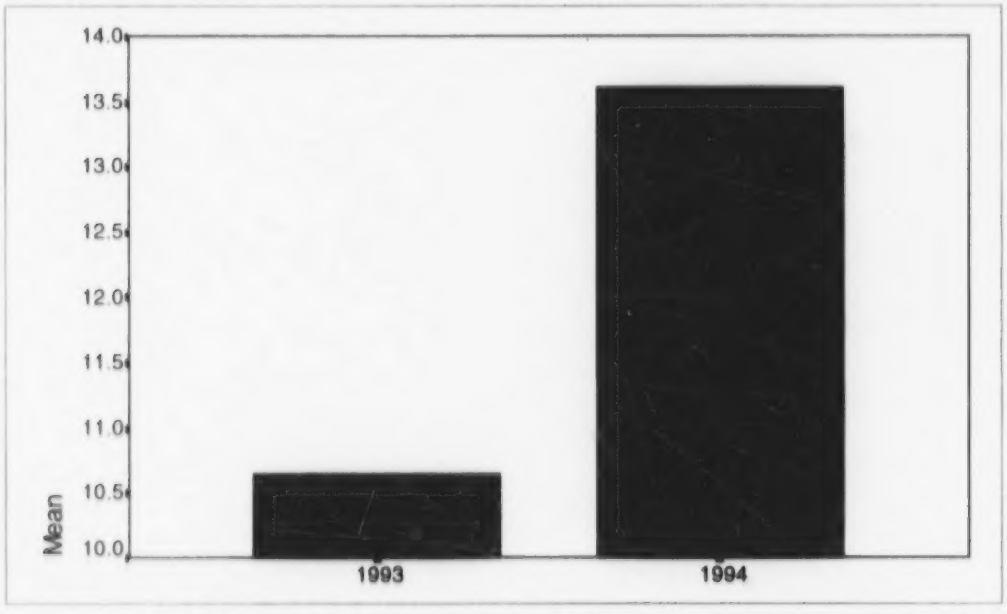


Figure 5.7 – Mean scores of functional literacy activity, 1993-1994

In the workplace context of functional literacy activity there was a significant level (sig. of F=0.000) of interaction by gender and language background; hence these factors jointly affected the functional literacy activity (workplace context) score. Male English speakers found most gain in the workplace.

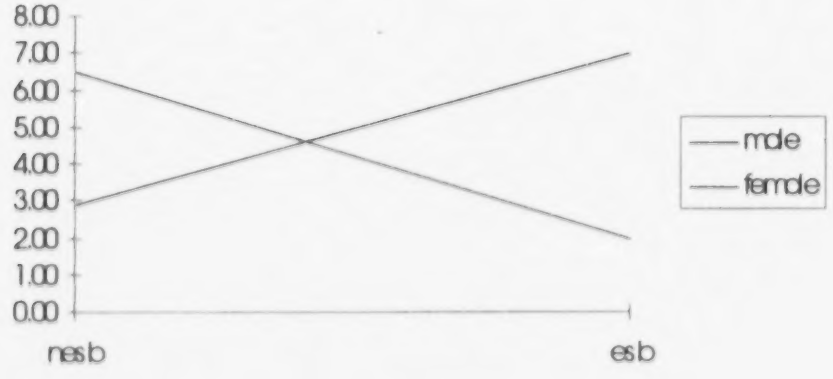


Figure 5.8 – Mean scores of functional literacy activity (workplace context)

Language background was significant in the functional literacy (community context) score, with non-English speaking preferred people having a higher mean score. Not surprisingly, this group who had the most potential for gain, did indeed gain more than the English preferred group.

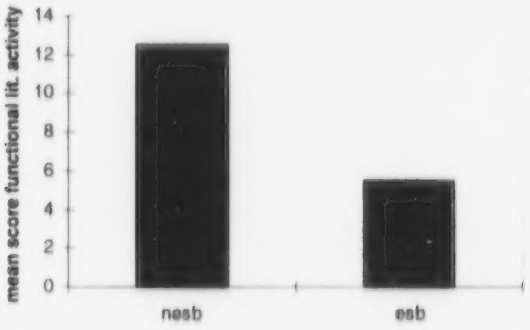


Figure 5.9 – Functional literacy activity (community context) by language background

Community Activity

To find change in community activity over two years, the responses to similar items by the same group of people were examined in 1993 and 1994. Results revealed little difference.

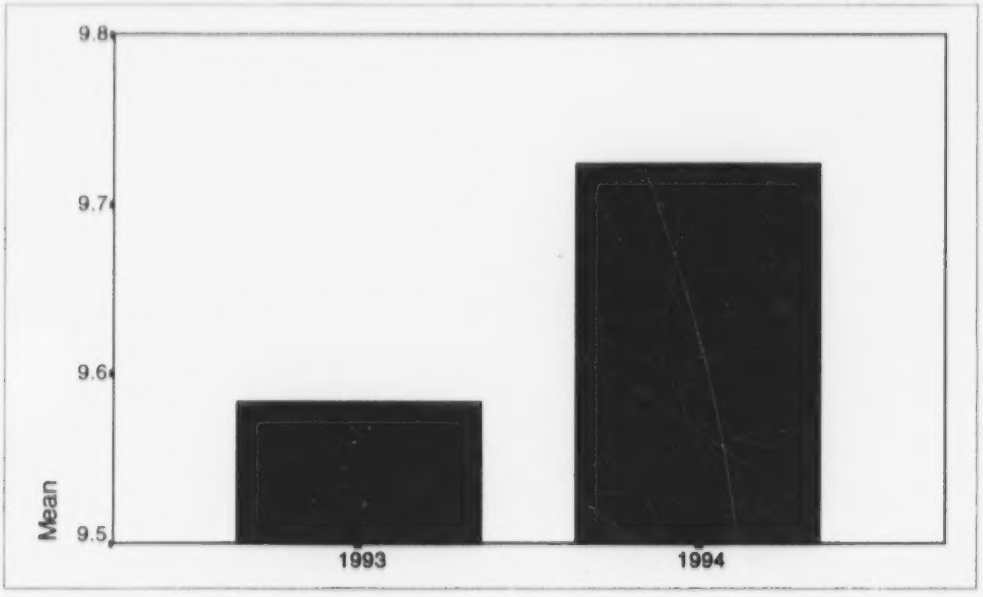


Figure 5.10 – Mean scores for community activity 1993 - 1994

Sociability

Examination of the 1993 and 1994 responses to similar items by the same group of people revealed a significant increase in sociability.

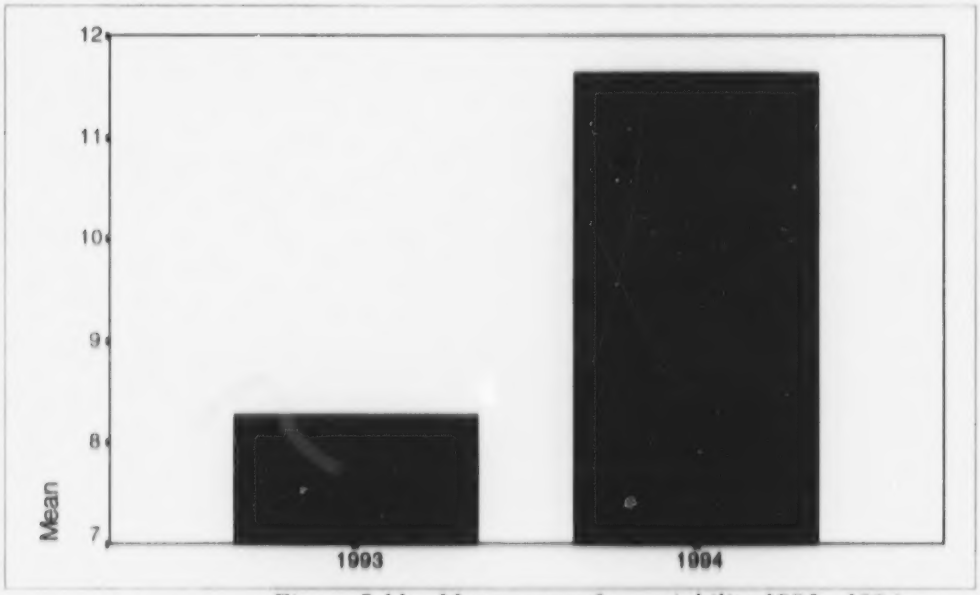


Figure 5.11 – Mean scores for sociability 1993 - 1994

Language background was a significant factor in the sociability measure, with ESB people having a higher mean score.

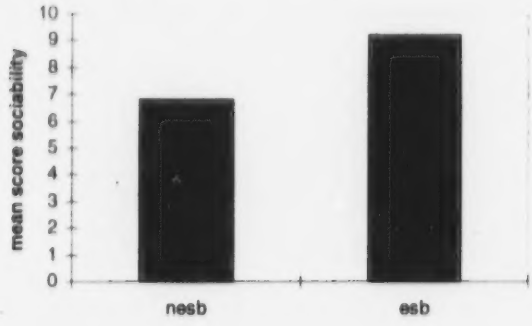


Figure 5.12 – Sociability according to language background

As a result of literacy program participation the participants have indicated that there is a general trend towards more outgoing social interaction. This is more pronounced among the English preferred group.

Language background had a significant effect (sig of F=.019) on the sociability (education context) measure, with ESB people having a higher mean score.

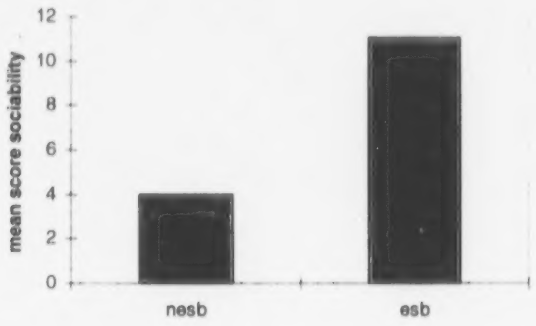


Figure 5.13 – Sociability (education context) according to language background

A comparison of means for the sociability measure broken down by employment status and course enrolment revealed higher scores among employed and enrolled participants. The message, not surprisingly, appears to be that employment leads to higher levels of sociability.

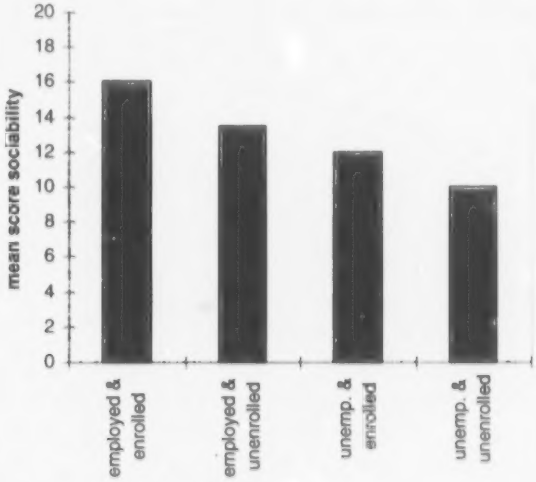


Figure 5.14 – Sociability according to employment and course enrolment

Changes and Initiative in Reading and Viewing Habits

As a matter of interest, participants were asked a range of questions regarding any changes in reading and viewing habits, and pro-activeness thereof. Responses revealed that 25.9 per cent changed the newspaper read, 24.4 per cent changed the television news watched, 15.0 per cent changed the radio program listened to, 4.4 per cent took part in talk-back radio, 13.8 per cent wrote letters of complaint, 10.3 per cent wrote letters of commendation and 24.4 per cent made a speech or presentation. Of all respondents, 92.5 per cent thought that the 1992 language and literacy course was worthwhile.

CHAPTER 6. DESCRIPTIVE RESULTS

Education Activity

Figure 6.1 displays the decrease in course enrolment over the four years of the study.

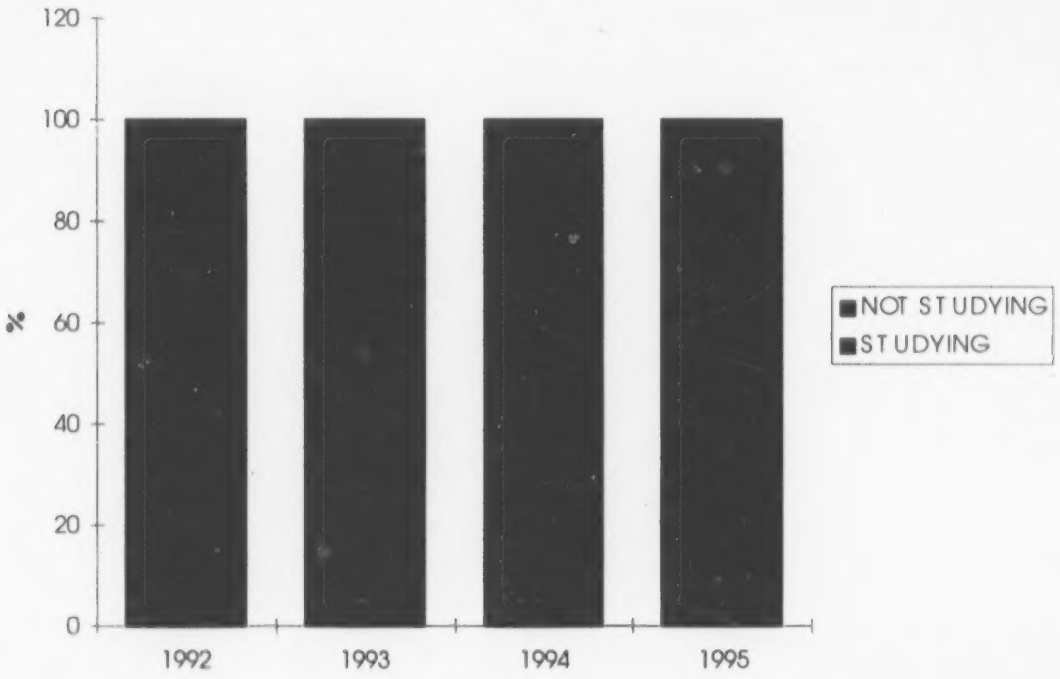


Figure 6.1 - Sample composition by course enrolment

Table 6.1 presents the breakdown of the course attendees after the four years: 14% were attending courses that lasted for less than ten weeks, 44.5% were enrolled in courses of ten to 25 weeks and 20.3 per cent in courses longer than 26 weeks; 62% had completed or were enrolled in a full-time courses after leaving school. Community awareness was not high; for example, only 49% reported that they were aware of educational possibilities in the local community and most of these were courses in the local TAFE college. Most (90%), considered education to be very important to them and a total of 64% reported that they wished to continue in some form of education after the current course. Nineteen per cent reported that their education was interrupted by physical or health problems, 18% could not remember being read to when they were young, more than 60% reported that they needed help when getting information from the government and 27% had difficulty reading labels and directions. More than 54% had severe difficulty filling out forms, and almost 47% relied on another person to help when they could not interpret written information. In numeracy, only 20% reported that they did not enjoy mathematics. Regarding incentive to attend, 28% were recommended to do so by an employment agency, 33% attended on their own volition and 29% were encouraged to attend by a friend or family member.

Table 6.1 - Course enrolment in 1995

Types of courses	*New*	*Continuing*	*Total*
Language and Literacy	16	37	53
Job skills	15	9	24
High school/General education	4	8	12
Hobby/General interest	2	7	9

Forty-three per cent stated that they had participated in a DEETYA labour market program/course at some time over the previous four years. During this time, 42 per cent had gained a qualification/educational certificate, although the nature of this was not ascertained; 45 per cent had to discontinue a course - the most common reason for this being getting a job.

As discussed in chapter 3, a notable change occurred among the male ESB group - where enrolment increased markedly, and the female NESB, where enrolment decreased markedly (see Figure 6.2). The employment participation graph showed the opposite, which may explain the change.

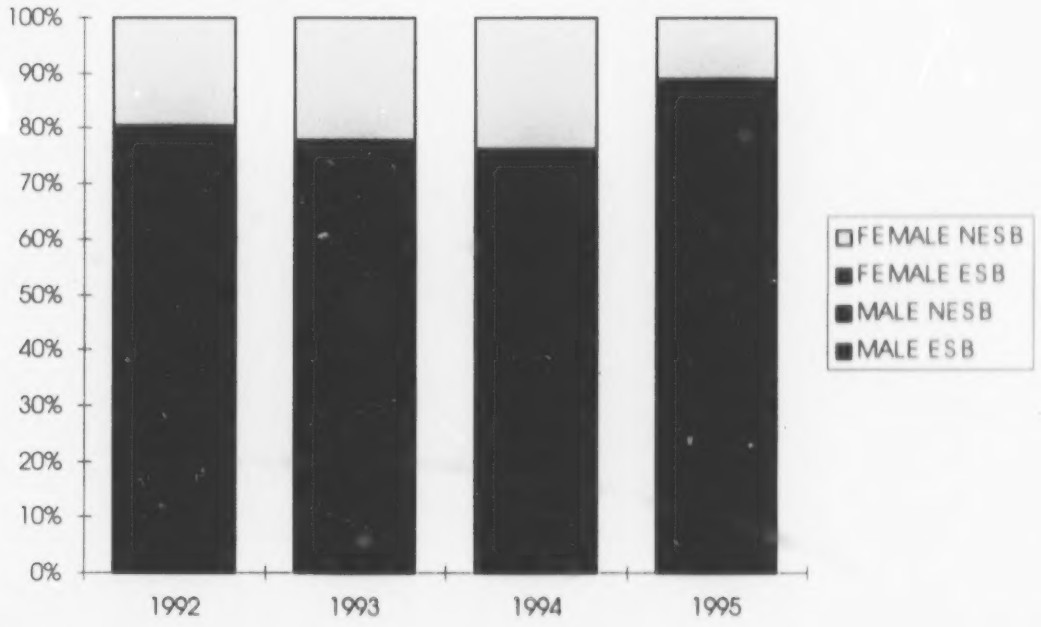


Figure 6.2 - Course participation by language and gender

Employment Activity

Figure 6.3 displays the increase in the percentage employed participants over the four years of the study.

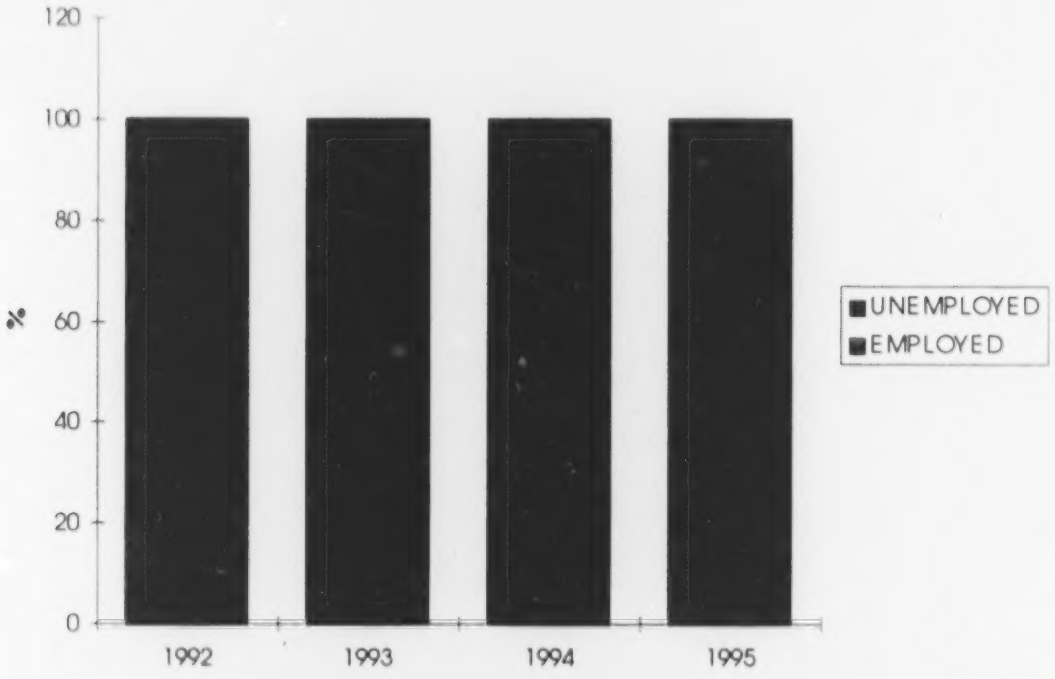


Figure 6.3 - Sample composition by employment status

Fifty-two per cent were employed after four years (compared with 23% in the first year); 15% had been promoted, 25% felt that they were better prepared for a promotion, 40% had learned new skills, 43% had become better at their jobs, 23% had taken on extra duties and 30% thought their jobs had become more interesting.

Figure 6.4 shows that the percentage of employed NESB males, who had the highest rate of growth from among the employed, dropped back in 1995. The employment rate among the male ESB group has continued to decline, whereas there has been a slight increase in proportion of female NESB and ESB groups.

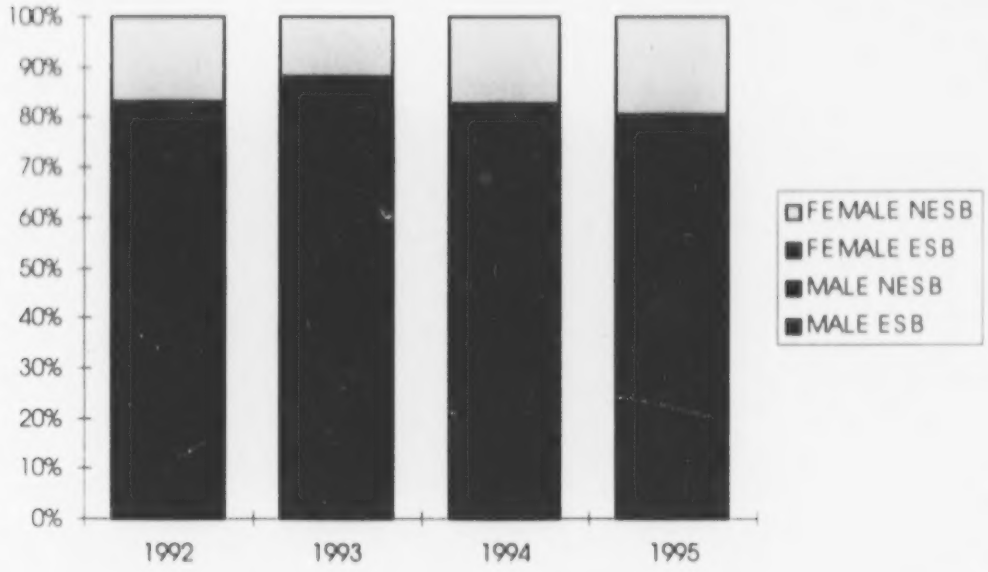


Figure 6.4 - Gender and language background of those employed

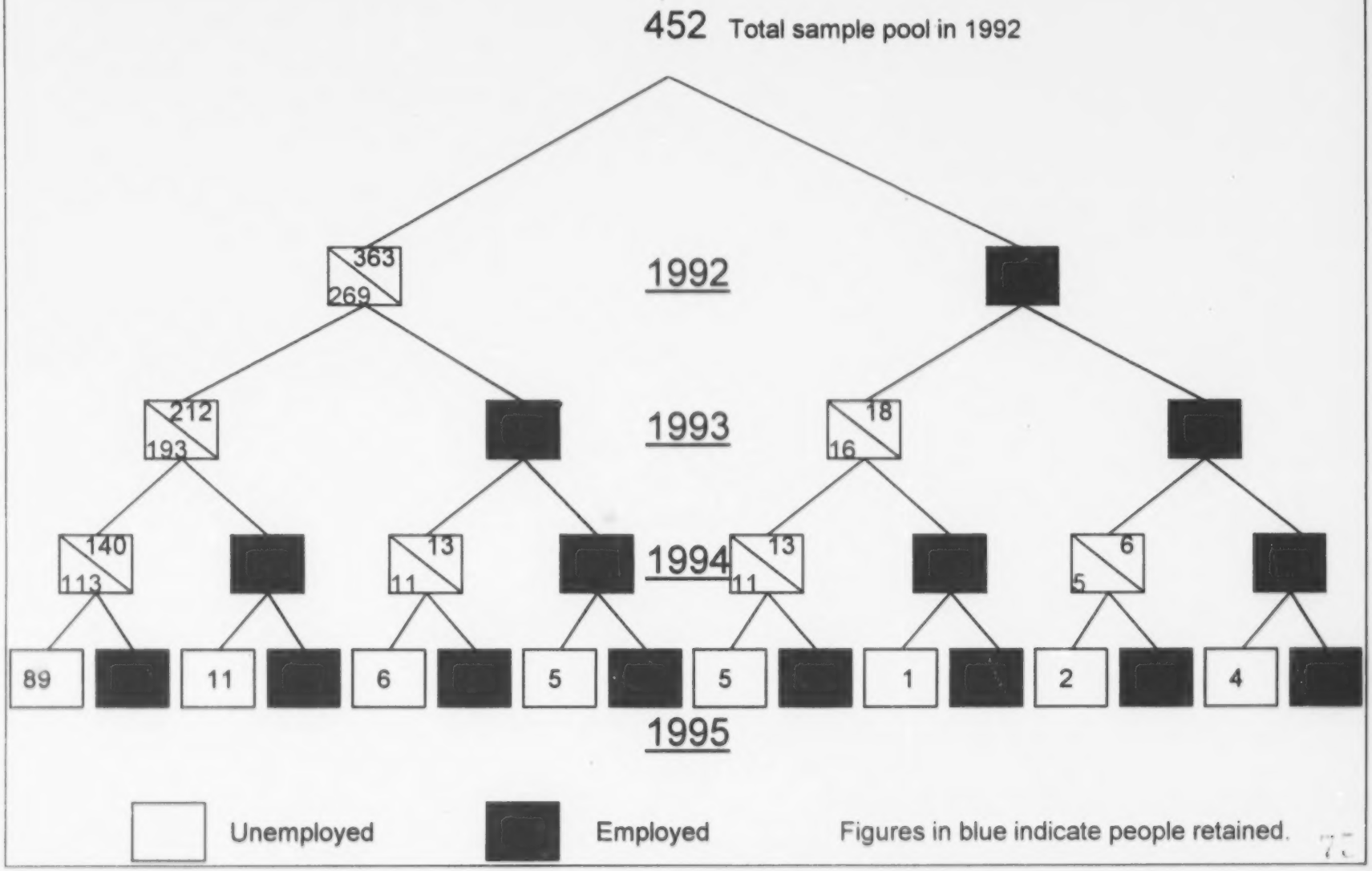
A dendagram in Figure 6.5 displays employment patterns for the sample since the start of the study. It shows that of the total employed in the final year, 25 per cent had been employed for the four years; 20 per cent gained employment in the second year and remained employed; 26 per cent gained employment in the third year and remained employed and 17 per cent gained employment in the fourth year.

For the group of 39 who were employed for the duration of the study, 64 per cent were studying after one year, 51 per cent after two years and 36 per cent after three years. Of these, 67 per cent were male and 77 per cent were EP clients. In addition, of the unemployed group in the final year, 72 per cent had been unemployed for the full four years, 4 per cent became unemployed after one year, 7 per cent after two years and a further 17 per cent after three years. The general trend was that the initial group retained their status for the full four years and the chances of changing status were small.

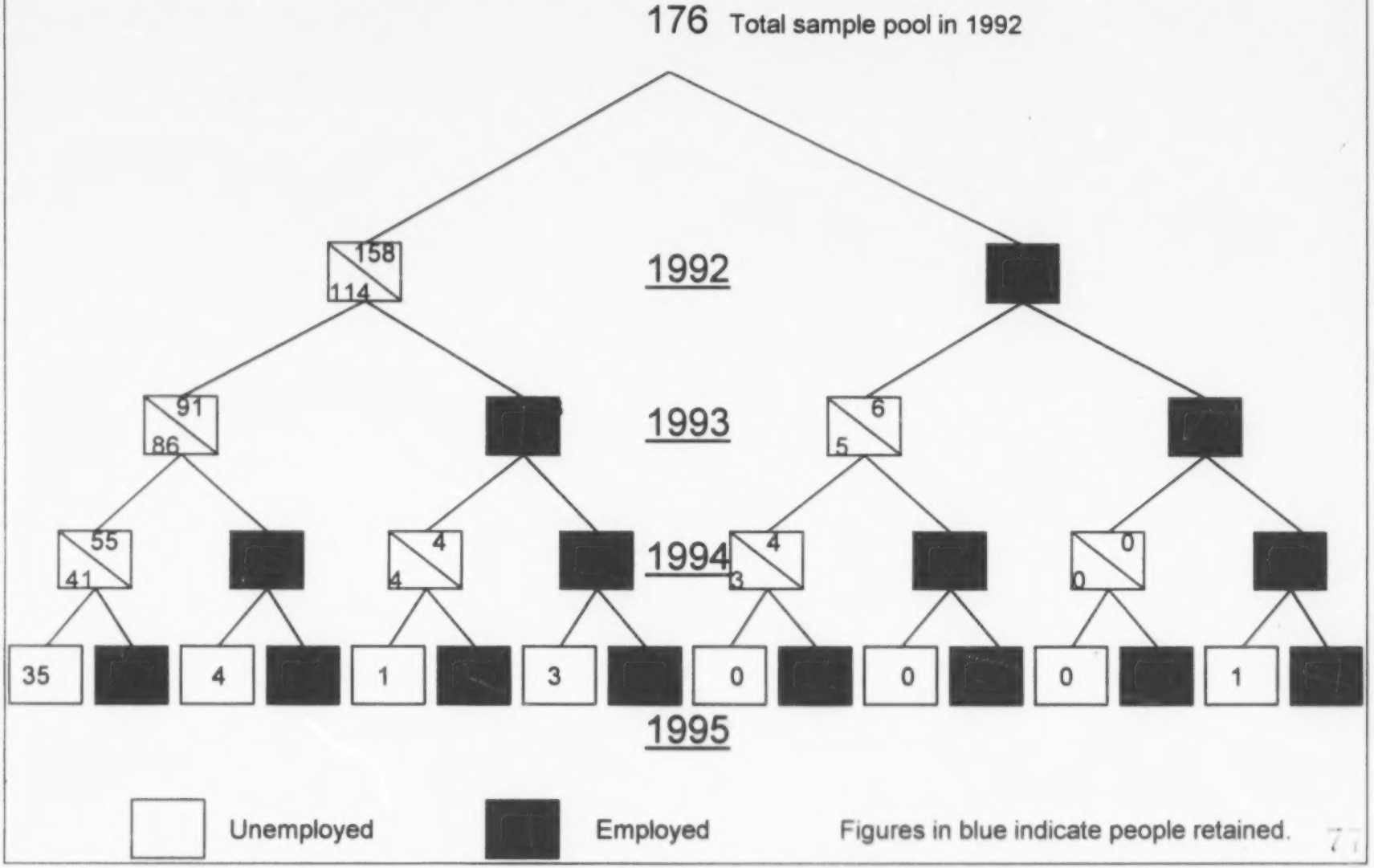
For the group of 89 who were unemployed for the duration of the study, 78 per cent were studying in year 1, 70 per cent in year 2 and 32 per cent in year 3; 55 per cent were female, and of these 61 per cent were married. During the study, 12 per cent of the females had babies but this does not account for the lower employment access rates described below. Further analysis of the dendagrams shows that 25 per cent of the unemployed people can expect to gain employment each year and once employment is gained, 90 per cent will remain employed each year.

Some interesting and potentially disturbing patterns are also revealed in the dendagrams. During the course of the study, the probability of a change in employment status was approximately 0.21 regardless of the direction (employed to unemployed or unemployed to employed). The dendagrams in Figures 6.5 to 6.9 below show a break down of employment patterns.

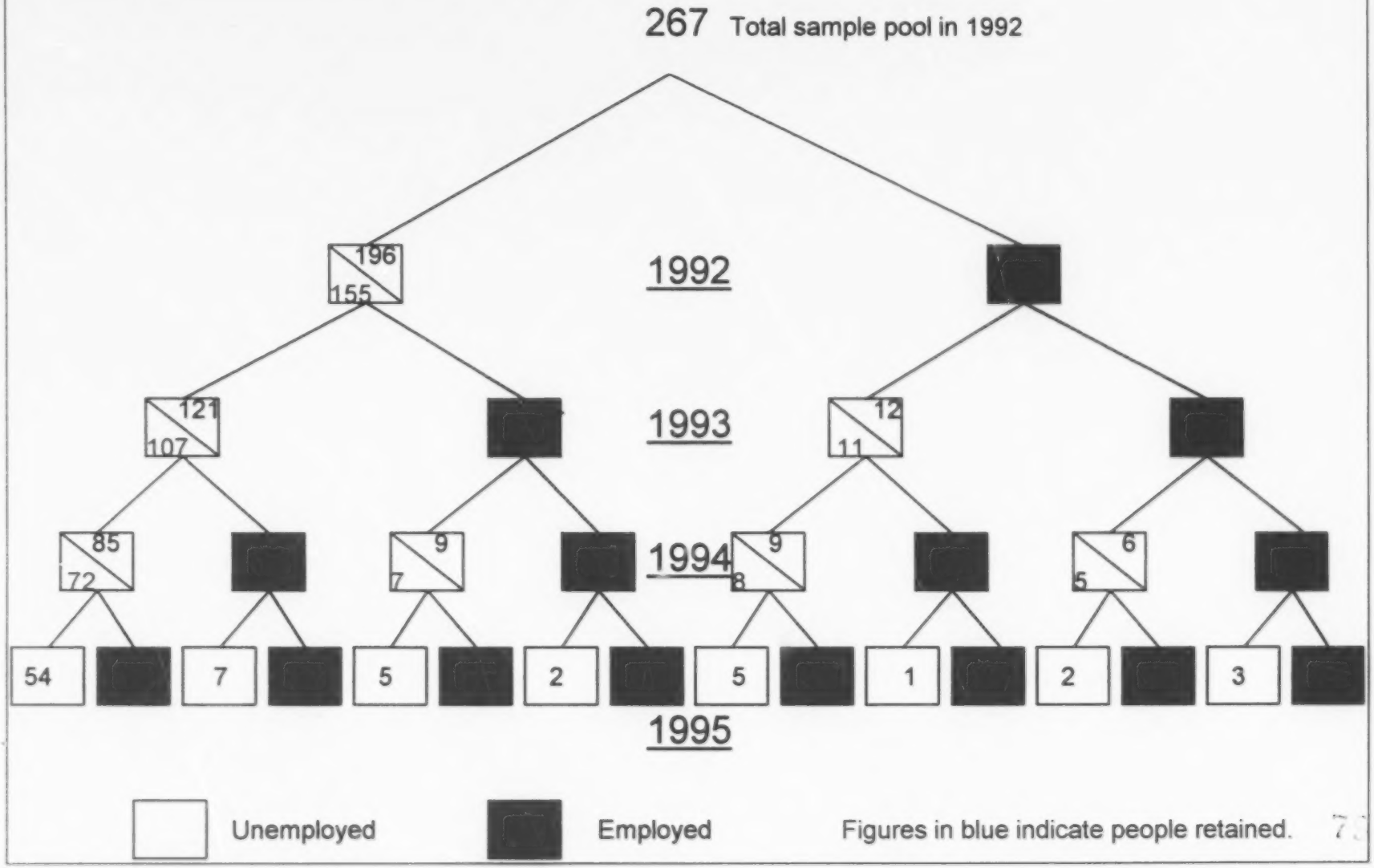
EMPLOYMENT PATTERNS



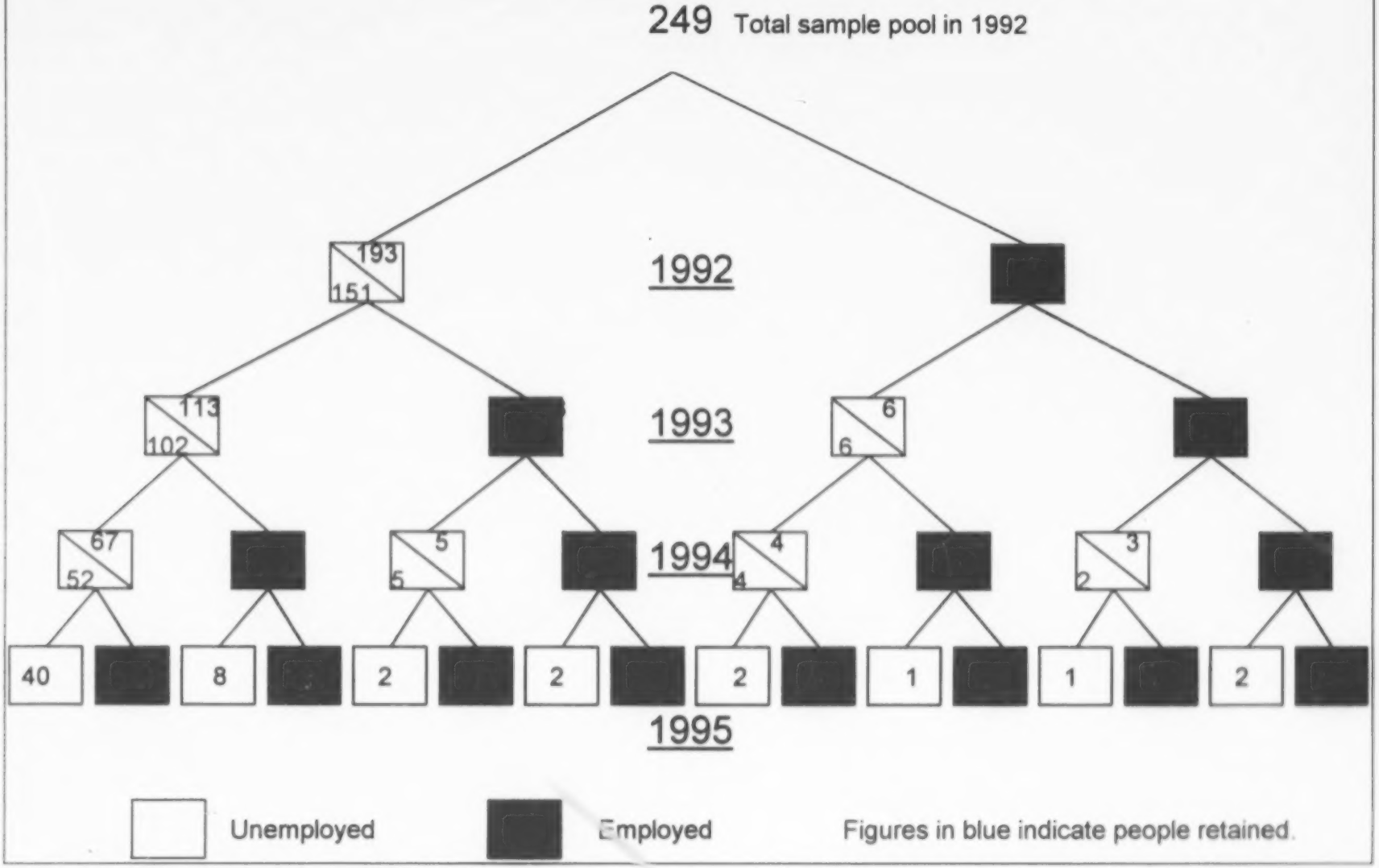
EMPLOYMENT PATTERNS - nesb

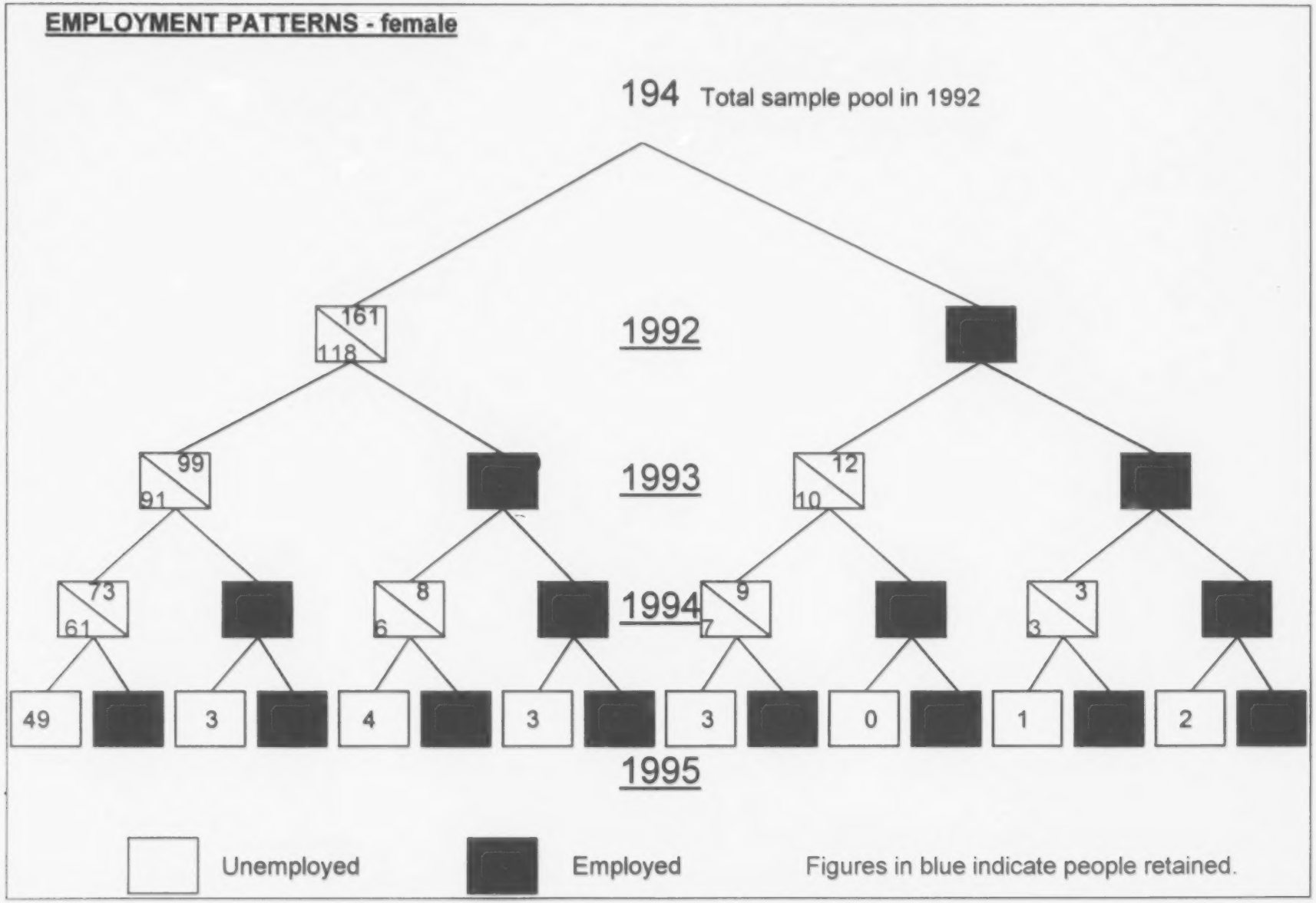


EMPLOYMENT PATTERNS - esb



EMPLOYMENT PATTERNS - male




EMPLOYMENT PATTERNS - female
194 Total sample pool in 1992
161
118
1992
99
91
1993
12
10
73
61
8
6
1994
9
7
3
3
49
3
4
3
3
0
1
2
1995
Unemployed
Employed
Figures in blue indicate people retained.

A comparison (refer to Table 6.2) was made of the employment take-up rates between this study's cohort and a group of Special Intervention Program (SIP) labour market program participants in Victoria.

Table 6.2 – Comparison of the employment take-up rates between study and SIP groups.

Year	*Study cohort % employed*	*Study cohort employment take-up rate (%)*	*SIP group employment take-up rate (%)*
1992	23	-	9
1993	34	21	13
1994	47	28	15
1995	52	21	17

* The figures were obtained from the then Commonwealth Employment Service (Heidelberg branch) as of 30.4.96, and were extracted from report program monitoring records.

The figures are not directly comparable, because they describe different populations; the SIP group is not a single cohort, but represents different groups of long term unemployed persons undertaking the labour market program for that year. Whereas, this study cohort is a single group and so changes of employment over a four year period can be explored, as against a one-year period for each of the SIP groups.

However, the differences are too large to ignore, especially in the second year of the study when the one-year time frame is common. The employment take-up rate (%) is the proportion of participants who gained employment each year. The average of approximately 25 per cent for this study's cohort could be interpreted as the post literacy program chance of employment. This value still exceeds that presented for the SIP labour market program. Given that the ratio does not decrease over the four years, the comparison must be given due consideration.

The residual effect of training on employment was examined. Combining the trends for employment and study enrolment produces the following interesting interaction effect:

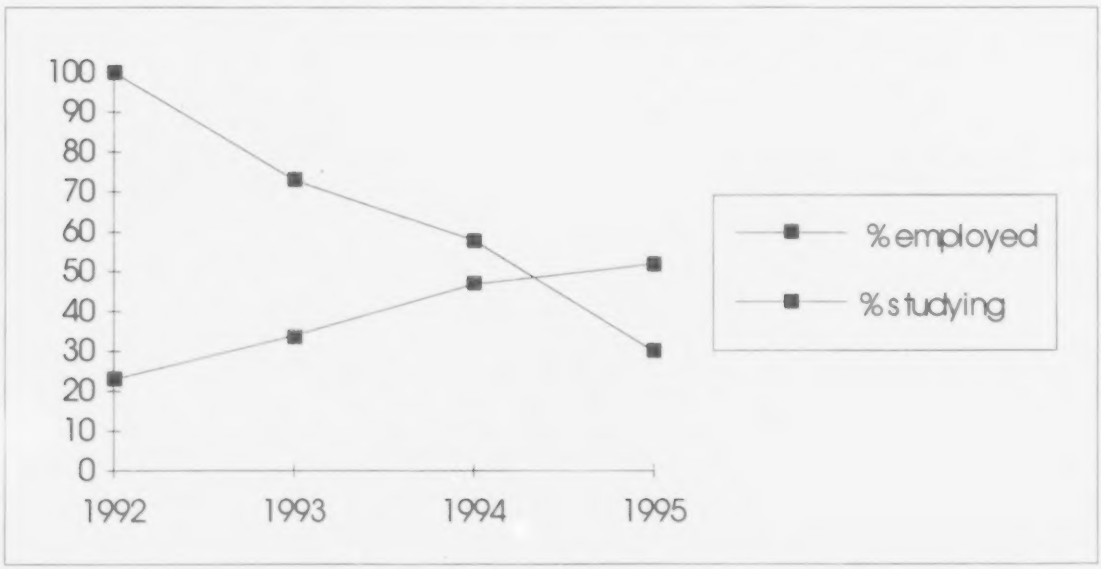


Figure 6.10 - Employment and enrolment (%) 1992-1995

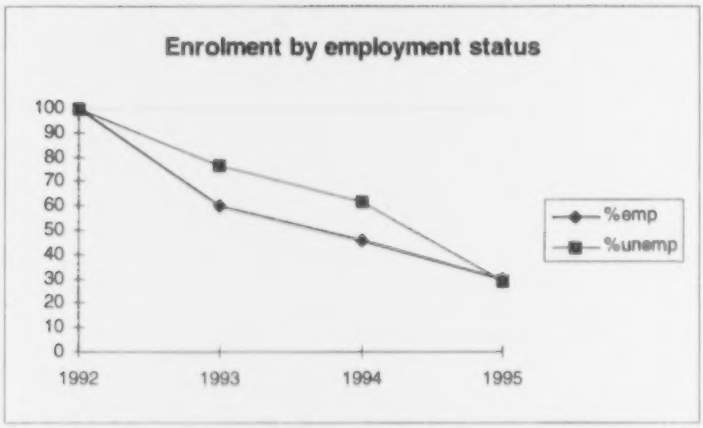


Figure 6.11 – Enrolment by employment status (%) 1992-1995

An examination of the above figures suggests that there may be a tolerance limit to literacy programs. After three years, there seems to be a general tendency to leave, and a reduced chance of gaining access to employment.

Changes in employment status over the four years differ for the major groups investigated (see Figure 6.12). The non-English preferred group appear to have the strongest chance of gaining access to employment (> = 35%); females have the lowest chance. However, this examination of the data does not allow for industry effects confounding the analysis. Nevertheless, it appears that some inequity exists in terms of language preference and gender when access to employment is considered.

Figure 6.12 – Probability of change in employment status

Literacy Activity and Confidence

Changes in confidence after four years seem to suggest that participants in general gained many positive outcomes: 88 per cent felt more confident with reading and 76 per cent indicated they were reading more; 72 per cent felt more confident in writing and 60 per cent indicated they were writing more. However, only 54 per cent felt more confident in mathematics and 43 per cent indicated that they were using more maths. Overall, 74 per cent stated that their lives had generally improved since doing the literacy class.

Strategies Used to Solve Literacy and Numeracy Problems

Perhaps one of the most striking results of the project is the change in literacy strategies used over the four years; Figure 6.13 illustrates a shift from the use of tools to cueing strategies and decoding skills. This is clear evidence that the sample in general learnt to read. What cannot be determined is the connection between this outcome and participation in literacy classes.

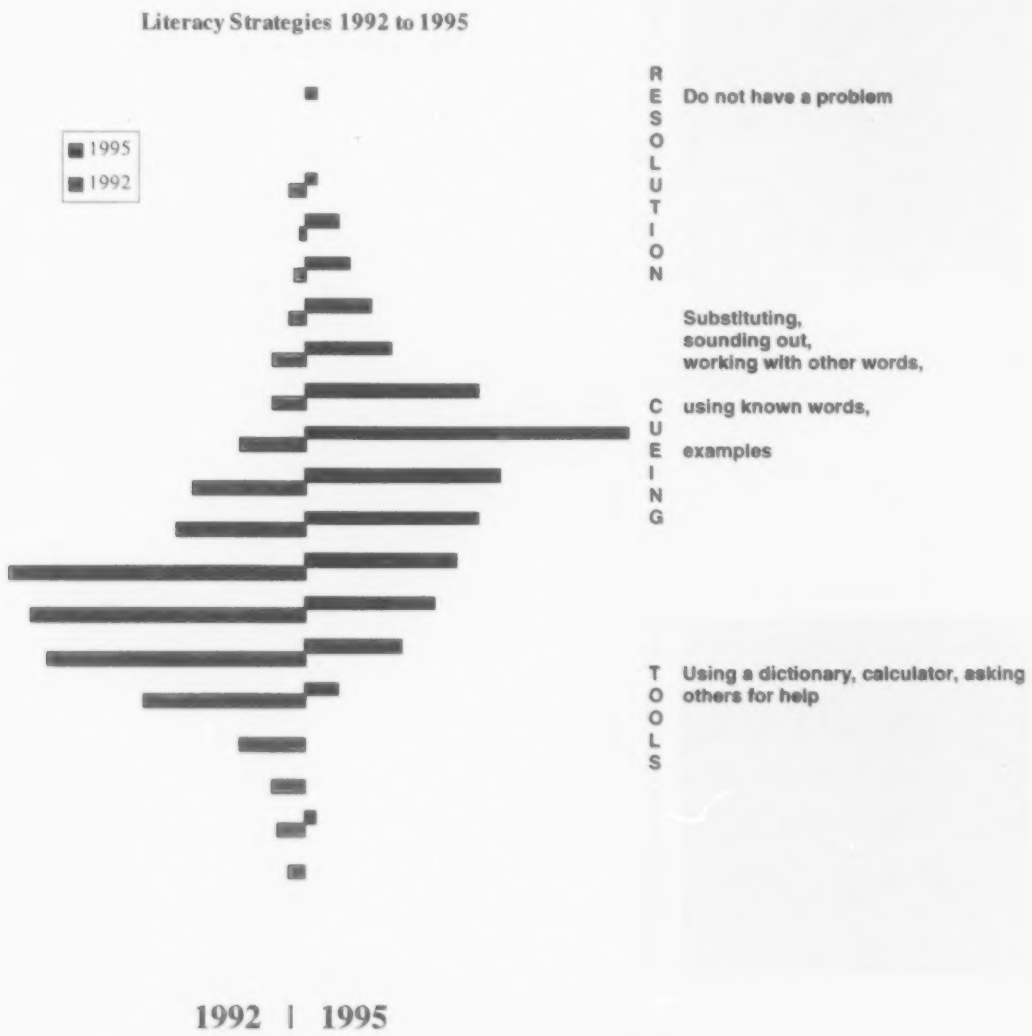


Figure 6.13 - Literacy strategies 1992 to 1995

88

Sociability

Changes also occurred in sociability: 68 per cent feel more confident to speak out in a group, 68 per cent feel they have gained respect, 76 per cent readily give advice to friends and 65 per cent think that their opinions are important. This illustrates the shift shown in chapter 4, where the progression of confidence in attitudes was outlined.

CHAPTER 7. ATTITUDE AND ACTIVITY FACTOR ANALYSIS

It has been seen that the two broad areas investigated in this project were the attitudes and activities of participants in adult literacy programs over four years. Regarding attitude, however, there was a need to examine whether the measures used actually addressed different underlying emotional patterns. For this reason, the scales developed in the study and reported in chapter 4 were reanalysed as sets to identify underlying causal factors that might explain patterns of response. Annual comparisons were not possible because of changes in measures from year to year; however, it is possible to examine how the underlying factors for each year might explain the following year's results. To investigate this, variables have been added sequentially into a factor analysis to explore the influence on factor structure.

Table 7.1 Variables studied in the first year

	Mean	Std Dev	Cases	Label
LIFE1	-.29647	.97823	408	PH1 life satisfaction
FEEL	.04209	.37263	416	PH1-SELF ESTEEM
ENGIMP	1.29922	.61250	179	PH1-IMPORTANCE OF ENGLISH
PRESS	.85631	.68259	388	PH1-PRESSURE FROM FAMILY & FRIENDS
SOCIAL	-.84002	1.06707	429	PH1-COMMUNITY & SOCIAL ACTIVITY
COMM	1.66507	.73348	203	PH1-AVAILABILITY OF COMM. FACILITIES
STRAT	-1.52713	.98285	439	PH1-STRATEGIES- LIT & NUM PROBLEMS
WORK	.32165	.35444	200	PH1-WORK ATTITUDES
WORKCON	.67616	.77447	294	PH1-WORK CONFIDENCE
HELP	2.26608	1.67151	451	PH1-NEED HELP FOR READING/WRITING

The results of the factor analysis, using a maximum likelihood extraction and varimax rotation, are presented below. In 1992, only two broad factors were identified from the collection of attitudinal measures. Neither was strong, but the first factor was almost exclusively a **sociability** factor; this indicates that the most sensitive variable to differentiate among clients was possibly sociability.

The second factor was the **help** needed. What is important here is the orthogonal nature of the factors in the early years of the study. The strength of the loading of these variables on the factors and the lack of relationship clearly indicates that differences in help sought for literacy and numeracy did not affect feelings of sociability. It is also interesting to note that neither of these variables were linked to attitudes to employment, community activity or education. There was a large range of sociability levels, rather than exclusively low sociability associated with literacy class attendance, and a large range of levels of help sought. Among the variables investigated, very few accounted for a great deal of systematic variance. Not surprisingly, there was uniform agreement about the importance of English and about the use of problem-solving strategies in literacy and numeracy.

Table 7.2 - Factor structure, 1992

Variable	Factor 1 SOCIABILITY	Factor 2 HELP
LIFE1	**.96026**	-.04401
FEEL	**.81505**	-.07635
ENGIMP	-.01831	-.16141
PRESS	.10037	-.00546
SOCIAL	.07871	-.06251
COMM	.04525	-.01831
STRAT	-.05977	.12942
WORK	.05617	-.09286
WORKCON	.05991	-.01354
HELP	-.10534	**.95683**
Eigen value	1.68	1.17
%variance	16.8	11.7

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A set of variables from the second year of the study was added to the analysis to investigate any change in factor structure; this would indicate how the second year's data was affected and related to the first year's information. The variables added reflected the change in circumstances, from the classroom to the telephone interview; hence, although formed from the same items or many of the same as in the previous year, they were being addressed in a different context, and therefore may have been measuring different constructs. Table 7.3 shows the variables and descriptive statistics.

Table 7.3 - Variables added to factor structure after two years

Variable	Mean	Std Dev	Cases	Label
PH2FL	.60684	.95798	329	ph2 functional literacy activity
LIFE2	-.47660	.79667	338	ph2 life satisfaction
RLIFE2	3.94643	1.34692	280	Ph2 self esteem
PH2COMM	-1.50072	.86871	346	ph2 community activity
PH2EMP	.35757	.60391	107	ph2 course -effect on employment
PH2EFF	.40424	.88393	276	ph2 General effect of literacy course

Interestingly, attitude factors identifying employment and course outcomes emerged; however, it is important again to note that these attitude measures were not related. The dominant sociability measure remained as the largest differentiating factor among the clients. The shift in explained variance of the help variable is noticeable; this was not measured again, but it is interacting with other variables measured in the second year to increase the communality.

Table 7.4 - Factor structure, 1993

Variable	Factor 1	Factor 2	Factor 3	Factor 4
LIFE1	.09287	**.98332**	-.05898	.01045
FEEL	.08835	**.79890**	-.07894	.06300
MATH	.03014	.10986	.06881	.01040
SOCIAL	.08459	.12688	-.00875	-.01145
COMM	.00731	.04420	-.02730	.08629
STRAT	.00478	-.06157	.11907	.07459
WORKCON	.03546	.07567	-.17567	-.00331
HELP	.00572	-.08927	**.98920**	-.03066
PH2FL	.01584	.07821	-.09439	.03873
LIFE2	**.96826**	.12385	-.00220	.04039
RLIFE2	**.85197**	.04635	.00260	-.01405
PH2COMM	.05019	.04363	.02746	-.04335
PH2EMP	.01983	.05587	-.00865	**.98933**
PH2EFF	-.00525	-.00358	-.03836	.09949
Eigenvalue	1.79	1.64	1.16	1.02
%variance	12.8	11.7	8.3	7.3

An interesting outcome is the stability of the factors identified in the first year. Little or no change appeared to occur in existing sociability and help measures, but, a new sociability factor emerged unrelated to that formed from data collected in the classroom: there appears to be a classroom-generated sociability and a non-classroom-generated sociability. In addition, after twelve months, attitudes towards employment emerged as a fourth discriminating factor.

By 1994, the factor structure of the attitude measures appeared to be more complex, but a more extensive data collection was undertaken. On this occasion, measures of attitudes were assessed in relation to each domain of the study: the workplace, education, community and household activities. Clear differences emerged between each of the home, community and the work environments. Initial analyses identify those with likely contributions. The new variables added are shown in Table 7.5 and the resulting factor structure in Table 7.6.

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Table 7.5 - Variables added to factor structure after three years

Variable	Mean	Std Dev	Cases	Label
PH3SOH	-.39070	.96198	316	ph3-home-sociability
PH3EMP	-.27480	.75904	125	ph3-employment activity
PH3EFW	.55423	.66682	142	ph3-emp only-effect of course
PH3EFE	-.04542	1.00715	192	ph3-educ-effect of course
PH3EFC	-.05132	1.11782	302	ph3-comm-effect of course
PH3EFF	-.39923	.87607	324	ph3-all-effect of course
PH3FLW	-.93096	.52480	114	ph3-work-funct lit
PH3FLE	-1.11874	.74480	175	ph3-educ-funct lit
PH3FLC	-.85020	1.13444	295	ph3-comm-funct lit
PH3FLH	.03549	.92220	306	ph3-home-funct lit
PH3COM	-3.57916	1.06173	322	ph3-all-community
PH3SOW	-.13970	.78571	132	ph3-emp only-sociability
PH3SOE	-.61818	1.15715	209	ph3-educ-sociability
PH3SOC	.32162	.85805	303	ph3-all-sociability

Table 7.6 - Factor structure, 1994

Variable	Factor 1	Factor 2	Factor 3	Factor 4
LIFE1	.09244	**.87742**	.03777	-.00496
FEEL	.08696	**.88743**	.01130	-.01053
MATH	.02807	.10217	.12902	-.11897
SOCIAL	.09085	.15144	.02451	-.00775
COMM	.00753	.03277	-.00444	-.06300
STRAT	-.00113	-.05033	.06347	.02486
WORKCON	.03966	.06274	-.03790	-.07046
HELP	.00812	-.10846	.00012	-.01841
PH2FL	.01639	.07236	.12924	-.01007
LIFE2	**.91896**	.13139	-.00254	.03736
RLIFE2	**.89404**	.05319	-.01117	.00138
PH2COMM	.03385	.04104	-.03256	.05001
PH2EMP	.02614	.09081	-.04665	.00016
PH2EFF	-.00518	.01628	.02114	.05837
PH3SOH	-.03751	.06519	.13790	.19890
PH3EMP	.04109	.02348	.05987	.00934
PH3EFW	-.05322	.05182	**.39687**	.00618
PH3EFE	.01988	.01273	**.25017**	**.55892**
PH3EFC	-.04777	.02102	**.65385**	.12439
PH3EFF	.04817	.01241	.85900	.19814
PH3FLW	-.00276	.00872	.11240	.08309
PH3FLE	.02931	-.00744	-.05036	**.59873**
PH3FLC	.03165	-.02149	.03537	-.07192
PH3FLH	.01859	.01660	.04458	.06601
PH3COM	.09368	.04138	.10411	.11299
PH3SOW	.03656	.01928	.02865	.06289
PH3SOE	-.00972	-.01792	.13810	**.61934**
PH3SOC	.05838	.09110	**.21515**	-.01899
Eigenvalue	2.89	1.97	1.42	1.12
%variance	10.3	7.0	5.1	3.9

The number of dominant factors did not change from phase 2 to phase 3. Still four factors were identified, with 25 per cent of variance accounted for among them, compared with 40 per cent in the previous year. The lowering of accounted variance is an artefact of the addition of new variables and a large increase in variance to be accounted for. The new variables did not explain a great deal of new information. The first dominant factor remained as the **non-class sociability** and the second was the **in-class sociability**, as for the previous year. The influence of the seeking **help** variable and **employment** attitudes diminished, as data on the effect of courses appear to explain remaining variability. The fourth factor appears to indicate an **attitude to education**.

By the end of the study the factor structure had simplified, not least because of a simplified form of data collection. Two broad factors emerged: employment and education. Once again, it is pertinent to point out that the reactions in these domains were not related. The following variables were added in the last year:

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Table7.7 - Variables added to factor structure after four years

VARIABLE	MEAN	STD DEV	CASES	LABEL
PH4EMP	.09254	.79591	126	Attitudes to employment
PH4READ	.73688	1.12086	253	Attitudes to reading
PH4WRITE	-.32082	.98806	257	Attitudes to writing
PH4MATH	-.13258	1.10372	233	Attitudes to mathematics
PH4STRAT	-.56474	.80391	270	Problem-solving strategies used
PH4COMM	-1.21591	1.01525	259	Attitudes to community activity
PH4SOC	.61761	.83447	264	Attitudes to social activity

Table 7.8 - Factor structure, 1995

VARIABLE	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4	FACTOR 5
LIFE1	.03672	.09040	**.92263**	.04115	.00006
FEEL	.04452	.09360	**.84832**	.01300	-.01980
MATH	.14141	.02853	.09528	.13965	-.12978
SOCIAL	**.28844**	.09077	.16777	.01661	-.03301
COMM	.01844	.01041	.03800	.01513	-.04706
STRAT	.09148	.00087	-.03917	.03913	-.00900
WORKCON	.03422	.04511	.06099	-.02310	-.07641
HELP	-.08243	.01409	-.11112	.00759	-.04080
PH2FL	**.26079**	.01527	.09707	.11277	-.03500
LIFE2	.04593	**.93193**	.12919	.00148	.03891
FLIFE2	.06651	**.88083**	.05695	-.01508	-.00756
PH2COMM	.04292	.03439	.04546	-.02261	.02570
PH2EMP	-.01355	.02353	.07260	-.00312	.02125
PH2EFF	.04336	-.00683	.01157	.00722	.06257
PH3SOH	.07583	-.03401	.06552	.12735	.18158
PH3EMP	-.03807	.04965	.01262	.06862	.01856
PH3EFW	.01077	-.04904	.06010	**.40775**	-.00237
PH3EFE	.04363	.01681	.00080	**.26512**	**.54631**
PH3EFC	.08866	-.04889	.01941	**.66800**	.12404
PH3EFF	.10219	.04590	.01329	**.83912**	.19049
PH3FLW	.09099	.00309	.02483	.10034	.05874
PH3FLE	.03812	.03341	-.00102	-.03985	**.60026**
PH3FLC	.11474	.03125	-.00879	.04205	-.06889
PH3FLH	.17669	.01959	.02966	.04464	.04211
PH3COM	.07048	.09882	.04163	.12119	.10360
PH3SOW	-.06222	.03961	.01429	.03335	.07305
PH3SOE	.06594	-.01601	-.01696	.13703	**.63556**
PH3SOC	-.11340	.06730	.08661	**.24215**	-.01767
PH4EMP	.15985	-.00474	-.06363	-.03078	-.07161
PH4READ	**.79646**	.01947	.02090	.02510	.08124
PH4WRITE	**.75133**	-.00751	.02297	.06829	.05699
PH4MATH	**.36206**	.01198	-.00128	.09535	-.01074
PH4STRAT	**.26520**	.02155	.00681	.03779	.05447
PH4COMM	**.55815**	.10190	.00153	.05708	.06360
PH4SOC	**.28450**	.03564	.11161	.06186	.00024
Eigenvalue	3.68	2.01	1.69	1.53	1.03
%variance	10.5	5.7	4.8	4.1	3.2

In 1995, five factors were identified. In this phase, the strongest factor is the **functional literacy activity** and **sociability**. The role of literacy in social and family life appears to be emerging. Factors 2, 3, 4 and 5 are identical to the first three in the previous year; that is, they relate to in-class sociability, non-class sociability and education.

Consequently, attitudinal shifts over the four years seem to have stabilised in terms of importance. Sociability and functional literacy emerge as the clearest attitudinal targets that explain most of the differences in attitudinal outcomes arising from literacy programs. The emergence of socially related functional literacy in the fourth year is especially interesting, given the opportunity for this variable to be identified in every year of the study; perhaps it points to a long-term effect of literacy classes. It does not

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indicate that everyone gained in socially related literacy, but it does point to the fact that after four years, this is the area that most discriminated among the participants of 1992.

These results might best be reviewed using a causal model of the factor structure over the four years. Figure 7.1 illustrates the number and nature of links between years and factors emerging.

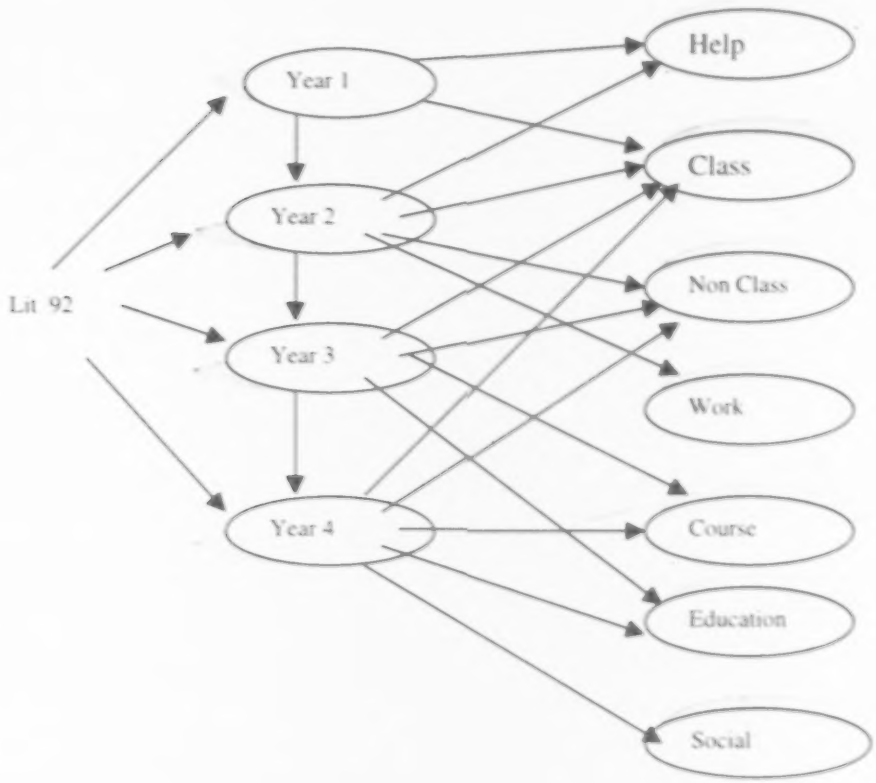

Figure 7.1 – The number and nature of links between years and factors

CHAPTER 8. GROUP MEMBERSHIP AND OUTCOMES

It is clear from the results reported in previous chapters that the program type and the group to which a student belonged had had a significant effect on plans for further education. It was of interest whether the same applied to the other three domains of the study, those of sociability, employment, and community. The following analyses examine the effect of group membership on outcomes in these three areas and on educational outcomes such as literacy activity and problem-solving strategies. In addition, they examined the effect of these variables on each other - that is, the extent to which changes in literacy activities and problem solving strategies affected employment, sociability and community activities.

In general, the analyses examined the differences within and between participant groups that were evident, four years after the first data collection using that collection as a controlling measure, or benchmark. This essentially allows the groups to be treated, were all things considered, in an equal situation, to start with and then to examine the change that took place. By successively exploring how measures and background variables help to explain the outcomes, it was possible to conjecture why differences in each of the four domains were obtained. Given the results produced in this report, it is clear that the initial group identified would be a powerful predictor. The analyses separated the differences due to individuals within groups from those due to the nature of the groups themselves (that is, the group effect). Measures on other explanatory variables were then explored to see how these added to the explanation. In effect, the data contains two levels of the analysis: those of the individual student and the group, which were examined simultaneously. This can be represented using the following general mathematical model:

$$Y_{ij} = a + U_j + BX_{ij} + e_{ij}$$

The purpose of the analyses is to predict the values of *Y* (activity or attitudes) for the group and for the individual and to assess the accuracy of the prediction; this is the fundamental task of assessment. The analysis starts with the general rule that the crudest prediction of any person's score is the overall average of the group, which is represented in the model as *a*; that is, every student is initially treated as typical. Then, as additional information about the group *j* and other variables, *X*, are obtained; the prediction of the outcome *Y* can be improved. The strengths of these relationships are explained using the coefficient, *B*. Generally the accuracy of the prediction is assessed using the proportion of variance explained in the dependent variable; typically this is small, of the order of 5% to 20%. What is left over is usually called error of prediction for the person *i* in the group *j* and is used to define the unique contribution of the person. Hence, this analysis makes it possible to identify both the effects due to person differences and the effects due to group differences.

Sociability, community and employment activity

These measures were examined using literacy activity, group membership, problem-solving strategies and other attitude measures as predictors, as well as group and individual differences on the year 1 measures. All measures needed to be 'normalised' for the analysis; this is a technical requirement of the computer software and of the assumptions of the analysis procedure (Rasbash & Woodhouse, 1995).

The analyses were conducted in stages to enable the statistical importance of the variables to be identified. The first variable examined was the two level analysis, accounting first for students within a group and then for differences between groups - that is, the effect of U_j then the initial measure was added to examine how much it added to the explanation. Following this, other explanatory variables were added after first exploring the data set for those variables that were likely to add most to the explanation.

Table 8.1 describes the variables used in the analyses. More detailed descriptions of the development and properties of these variables can be found in Corneille & Griffin's technical manual (1994).

Table 8.1 – Variables used in analyses

Variable	*Description*
Strategy	Problem-solving strategies in 1995; descriptions of this variable are found in earlier chapters. Problem-solving strategies in 1992 were equated to the 1995 values and the changes over the four years that are reported in chapter 6.
Literacy	This described the activities in literacy by combining reading and writing activities, which are described in earlier chapters.
Numeracy	This is the mathematics and numeracy activity level as described in chapter 4. It takes into account the everyday numeracy tasks undertaken and uses a scaled value.
Sociability	Sociability measures were defined using responses to questionnaire items dealing with social interactions, interpersonal activities and aspirations. A measure of this was obtained in each year of the study.
Community	Community activities and attitudes were assessed using items that described both actions in the community, use of resources and attitudes to community issues.
Employment	This set of variables described both activity in an employment context as well attitudes to employment. Given the low proportion of employed participants it is oriented more towards the impressions of rewards, aspirations and perceived effects of literacy programs at work.

The details of the analysis will be reported elsewhere; in this report, the results were only examined where the predictors were found to contribute significantly to the variation.

Table 8.2 presents each outcome measure in terms of the proportion of variance accounted for by the group (or provider) in year 1, the measure in year 1 and then other measures as obtained in year 4.

Table 8.2 - Proportion of variance for each measure

	Proportion of Variance			
Measure	*Year 1*	*Group*	*Other measures*	*Total*
Literacy activity	2.1	32.1	1.9	36.1
Numeracy activity	1.1	22.3	4.7	26.8
Strategies	1.8	16.0	9.7	15.5
Sociability	1.1	12.1	1.6	11.2
Community	2.2	7.9	2.2	54.1
Employment	2.8	49.1	2.8	29.8

Other variables in the analysis are given in Table 8.3

Table 8.3 Other Variables

Outcome	Other Measures
Literacy activity	Strategies95, numeracy95, strategies92
Numeracy activity	Literacy95, strategies95
Strategies	Literacy95, and group average literacy95
Sociability	Literacy95, sociability93
Community	Literacy95 , sociability94
Employment	Sociability94, literacy95, numeracy95, community95

Several results of these analyses bear further study. First, the importance of literacy activities in explaining other outcome measures needs to be highlighted; current literacy activities are an important contributor to every other such measure. However, no variable can explain as much as can the provider. The group (which is the provider) to which the adult belonged in the first year of the study is by far the most important variable in explaining differences in long-term outcomes. It accounts for as much as 49 per cent in the case of employment to as little as 7.9 per cent in the case of community activities and attitudes.

In the presence of such large explaining power, all other variables are swamped in terms of explaining outcomes. This may help researchers to understand why adult literacy studies often fail to identify important predictors of outcomes. The effect of group membership on explaining employment activity and attitudes deserves comment. This analysis can be expected, given that some groups were situated in the workplace and involved employed participants. The dichotomous variable 'employed/unemployed' would confound this analysis given the workplace and classroom locations of the initial groups. Nevertheless, the impact of group membership is important. The implications are serious. It implies that the outcome of an adult education class is most affected by the provider or perhaps the teacher. While this may be embraced by the profession, it implies that the quality of the provider and the teacher is the most important variable in the provision of adult basic education. The class group or the provider is most likely to be the most potent intervention instrument in providing literacy related outcomes. The impact on social, economic, community and educational outcomes are more related to the provider of the literacy class than on the literacy gains themselves. This is a result of some importance and the implications for training, organisations and delivery of adult basic education may need to be considered from a different perspective from that usually adopted. The following value added analysis may point the way, although without the opportunity to follow up the results and fully evaluate the programs, the providers and the quality of the delivery process, it is difficult to turn the results of this study into practical advice for policymakers and program providers.

Value Added Impact

Value-added analysis enables an examination to be made of the difference between a predicted measure, based on prior observations (and the general pattern in the data), and the actual outcome; thus, it can be regarded as a measure of the progress during the period of study (Taylor Fitz-Gibbon, 1997). The measures required are estimates for each client and the group to which he or she belonged at the start of the project and at its later stages. The longitudinal nature of the project has made multiple examinations of change possible, but merely examining change would not put the data into any context. The results in this chapter enables group data to be analysed as well as that of individuals. The project was not evaluative in that no program, provider or group could be identified, but it is imperative that the study examine the data to identify the best explanations for changes in social, community, educational and employment activity and attitudes. The analyses in this chapter identify the group differences that exceed expectations, based on the levels of activity and attitudes that the participants began with.

As reported in earlier chapters, the survey and questionnaire data was used to derive a series of scales that measured outcomes in each of the four domains of the study. These measures became the basis for the value added analyses. The analyses are important because they set a baseline for identifying best practice, using student outcomes as the marker. Also, if best practice can be translated into procedures and practices in training, assessment and implementation of basic skill education, then this in turn would enable empirically determined best practices to be established for benchmarking. No comparisons across classes are required to identify the value-added component; instead assessment at two points are required where the class is compared to itself, given the overall trends of improvement in the data. This chapter takes only the first step. In order to capitalize on the value of the analyses it would be necessary to undertake provider case studies that focus on the activities of both the most successful and the least successful.

Several variables in the study lent themselves to these analyses. Previous analyses have identified the growth in literacy strategies, changes in sociability, mathematics and reading activity, community activity and attitudes, as well as education, employment activities and attitudes. The following analyses examine the deviations from predicted values for these measures.

There are no absolute measures for this analysis. Obviously it is nomothetic, and dependent on each class being compared with the average trend. It is based on the following equation.

$$Y_{ij} = b_0 + b_1 X_{ij} + e_{ij}$$

Where Y_{ij} is the predicted score of individual in class j on the measure of interest, b_0 is the average of all individuals on the first measure; b_{ij} is the regression coefficient linking the first and second measure and X_{ij} is the score on the first measure. Then $(Y_{ij} - \bar{Y}_{ij})$ is the difference between the predicted and observed measures. And SE (Y_{ij}) is the standard error of the predicted score. Then a test of the deviation can be determined using the ratio $(Y_{ij} - Y_{ij})/ SE(Y_{ij}) = t$.

This analysis allows examination of groups in terms of the departure from expected and observed measures; it was undertaken on each of the measures outlined above, then aggregated for the participant groups in the first year of the study. No group suffers from its initial position, but the analysis assumes that each can improve at the same rate, all things being equal, and that rate is defined by the coefficient b_{ij}.

Table 8.4 illustrates the results of these analyses. The first column indicates the type of program; codes 1 to 3 indicate class-based programs and codes 4 and 5 indicate workplace-based programs. The second column represents the numbers of participants involved in the study from a provider and the third column indicates the provider. The remaining five columns show the standardised deviations for reading activities, mathematics activities, literacy and problem-solving strategies, and community and employment attitudes. Negative values indicate that the mean observed score of the group is less than expected; positive scores are those above predicted levels.

Table 8.4 – Standardized deviations for measures by provider level

type	n	provider	Literacy activity	Numeracy activity	strategies	community	work
1	11	1	**2.58**	0.81	**3.01**	-0.43	0.73
1	10	2	**-2.44**	1.74	-0.53	**-2.90**	-1.68
2	12	3	-1.82	1.91	0.56	**-3.71**	1.31
1	50	4	**3.59**	1.64	0.59	**2.11**	-0.14
1	19	5	**4.38**	0.57	1.04	0.69	**-2.15**
1	20	6	-1.69	0.02	0.57	0.29	-0.06
1	14	7	**-3.02**	**-2.66**	0.05	0.04	
1	21	8	-0.61	0.01	-0.06	-1.46	-0.64
1	24	9	-0.79	1.68	-0.75	-1.91	**-3.11**
2	29	11	-1.02	-0.66	-0.81	**-2.32**	-0.32
2	5	12	-0.28	-1.78	**-3.15**	-0.77	
2	5	14	-1.54	-1.00	**-3.86**	**3.18**	
3	20	16	1.19	1.94	1.46	-0.44	-0.89
3	24	17	-1.31	0.86	0.91	1.70	-0.77
3	14	19	0.99	-1.49	-0.41	-0.81	**-3.24**
3	20	20	0.69	**-3.40**	0.12	0.78	
3	17	21	**2.34**	0.79	-1.10	**-2.56**	-1.93
3	44	**23**	**2.63**	1.10	0.44	1.32	-0.19
2	14	29	-0.93	0.42	0.06	-0.33	-1.16
2	1	30	**2.78**				
1	5	44	1.10	-0.52	0.31	**3.45**	
3	15	45	**3.99**	**-4.22**	0.13	0.59	1.87
4	17	46	0.88	-0.49	**1.94**	0.44	-0.06
4	2	**47**	**-2.20**	**3.57**	0.92	1.21	**4.16**
2	1	48	-1.31				-1.02
5	8	50	-0.77	**2.27**	**-2.11**	**-2.05**	-1.02
4	13	**51**	-0.12	-0.11	**3.48**	**2.80**	**3.22**
5	3	60	**2.77**				0.69
4	2	61	**-2.94**				**3.35**
5	3	62	-0.98				0.54
5	9	63	**2.30**	-0.09	**2.50**	**1.80**	0.60

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The figures in bold indicate changes that could be considered statistically important. The size of the impact makes it also potentially important both educationally and socially. It is noticeable that gains are concentrated at the lower section of the table and losses at the top; it is clear that there are a large number of statistically significant departures from what can be expected, and that these are both positive and negative.

Clearly, the reading activity changes over the period of the study exceed the expected amount ten times, compared with three occasions for lower than predicted outcomes. When this is added to the information reported on shifts in strategies, it gives important evidence that the particular group learnt to read and, more, that specific providers are more closely associated with the gain than others. A challenge would be to identify what these groups have done and how the procedures led to the gains in reading, but the lack of an evaluative focus precludes the project team from doing this.

While sex, age and language make differences in each of the outcome variables, the biggest contributor is the provider. It is clear from the tables above that the differences between providers are large. However, the variance at provider level is also large, indicating that variability in outcome measures is also large within groups at individual level. In each area, the large variation in outcome measures may be attributable to a range of explanatory variables not possible to assess in this study, e.g. location, course type, local history, personal circumstances etc. Some follow up case study work could be needed to identify the best predictions of such a large variation. The practices, for instance, that lead to the larger gains could justifiably be called 'best practice'. Eradication of practices that lead to the large losses can also lead to best practice. Together, such examinations should lead to the development of professional developmental programs for adult education instructors.

Educational Outcomes for the Population

Previous chapters have reported educational aspirations and attendance figures, attitudes to education and other educational outcomes such as functional literacy and problem solving strategies. It was clear that reading and general literacy had improved. This is possibly a result of participation. At the end of each year participants were asked to identify programs they were in and/or whether they had plans to enter further study. The decision to continue activity in education was taken to indicate the effectiveness of the course. Table 8.5 summarises the results of this survey. The total numbers still active in education was computed as an outcome. In particular, those who changed or planned to change, could be an estimate of continuing education after the initial literacy program.

Table 8.5 – Current and planned course enrolment

	New	Same	Planned
TAFE	96	53	72
SkillShare	18	6	12
Community	3	6	2
Language	21	5	17
School	4	2	3
Work	4	11	3
Other	28	21	22
TOTAL	174	74	131

Those active in education or planning further education represent a large proportion of the sample, and whether the intention is realised or not, it indicates a general tendency for adults to remain in education. Moreover, by the end of the third year of the project many were planning to use their basic skill education as a means of gaining more training or education. It is also clear that these plans were largely affected by the type of training program in which they had been engaged in the first year. Literacy programs linked to school based programs, such as the adult certificate clearly were chosen in order to obtain access to further education. Language classes in TAFE or adult migrant programs also attracted above average proportions of those who wished to further their education, especially in vocational oriented courses related to previous overseas credentials. The numbers in community classes were too small to make any prediction about the motives of the small proportion reporting intentions to continue education.

CHAPTER 9. CASE STUDIES

Introduction

The most striking fact about the case studies is their diversity. The fourteen informants

- Serina
- Harry
- Michael
- Julie
- Zora
- Vesna
- Bich
- Iris
- Jacinta
- Lucia
- Quyen
- Rose
- Serim
- Luigi

vary in how they came to be involved in adult literacy classes, in their expectations and motivations for commencing the courses and also in the outcomes they experienced. In fact, they differ across almost every variable chosen for examination in the analysis of the responses of the total cohort.

Serina started her educational journey when a higher degree student, Cathy, who had befriended her while preparing a thesis on her ethnic community sought to renew the friendship. The arrival of an informed friend at the time when Serina was ready to start learning to read was timely, and in some sense fortuitous. Perhaps Cathy's intervention only hastened what Serina might well have started on her own, but it is clear that Serina believes Cathy's role was pivotal.

Harry tells his story in his own words after two years participation in adult literacy classes. For Michael, the impetus was the humiliation he felt at being unable to spell correctly on an application form for a training program. He shared his feelings with a workmate who suggested a local community house program. Julie discovered her adult literacy program when she drove her sister to another program while the sister's car was being repaired. All other case study informants were part of a workplace literacy program. Each has a unique story that illustrates their background, as well as their struggle and perseverance in learning another language.

Expectations seem to have varied considerably. Serina was not sure she would cope, but her desire to help her children at school gave her the commitment to succeed. Michael wanted his crane chaser's certificate; Julie seems not to have had any particular end in mind, but ten years after her initial contact with the program she is still participating in literacy classes. For many of the workplace informants the study seems to have been a surrogate ESL program. Even after it was completed, almost all spoke of it as having improved their English. One has the sense these people would be bemused by debates about distinctions to be drawn between ESL programs and literacy programs. For them, at least, the ends are indistinguishable.

What of the outcomes for each of the informants? Michael got his crane chaser's certificate, his forklift truck driver's licence and a promotion from the workshop floor. He has not ruled out the possibility of further training, but he achieved his initial goal. Harry has coloured lenses, and whatever reservations others may have about their efficacy he is satisfied that they solved his dyslexia problem. Julie gained enough independence to end an unsatisfactory marriage, but still seeks the security of further classes ten years after she started. Bich would love to take on further study, but for the time being at least finds life as a sole parent

too demanding to consider such an option. Zora is able to use her developing literacy skills in her devotional reading.

To present each case study in full would require many volumes. The main points have been distilled, and at the end of the chapter an overview of the chief findings is presented.

Serina

Serina was born in Pakistan in 1952, the third child of five children. Her father and mother were very poor share-farmers; the main crops were cotton and maize. The two sons and three daughters worked from morning to night on farm tasks. Serina says, 'There was no time for thinking about school. Mum and Dad couldn't read or write. Survival was what was basic'.

Serina's grandfather had visited Australia at the age of eighteen as a merchant seaman. Serina says, 'He came here many times on cargo boats and he decided that one day he would like to bring his family here to live'. Her grandfather married in India, but he migrated to Australia after his children had left home; when he had settled, he sponsored his sons to come to Australia to work for better wages so that they could send money back to support their wives and families.

Serina recalls her father being away and coming home to the farm from time to time. She was eight when he was able to bring his whole family to Australia; they arrived in Brisbane in 1960. They felt very sad to leave friends and relatives and found everything in Australia so strange and different. Only her father could understand the language, and Serina remembers being very frightened. 'Dad's brother had found work on a banana plantation near L____ in New South Wales. He found some work on a farm for Mum and Dad, and we moved there. There were other Indian [sic] families working on banana farms in the area, so we made some friends there'.

Serina continues, 'I didn't go to school, but I quickly picked up the language and learnt to speak fluent English. I still couldn't read or write, and so I just helped Mum and Dad on the farm and then I got my licence. In those days it was just a driving test. I would drive for the family shopping and help with transport for the farm, doing all sorts of things'.

'When I was twenty-one, Dad told me he had arranged for me to marry a Pakistani man in the old country. This meant I had to go back to Pakistan. I was scared, but our customs meant a lot to my parents so I accepted my fate and returned. My marriage was happy at first, but it was not to last. My husband was cruel, and I was very worried about staying with him. I had four children very quickly and we were very poor. My brother came to Pakistan to see us when he married. I told him I wanted to return to Australia. He went back to live in Queensland at a place called G_____. We are a very close family and so when he was able, my brother sent me the fare for myself and my children. I knew my life was going to start again'.

In 1982 Serina and her children came to Australia and went to stay with her brother in G_____. Another brother also lived there, and both worked at the local sugar mill. Serina says, 'I knew I wouldn't be able to stay too long with my brother as he had kids, and there were so many of us it was uncomfortable'.

Serina rented a small place for her family after she got work in a margarine factory. From there she moved to a Housing Commission home, and drew a single-parent pension. She was isolated and lonely, but says she knew of no way of improving her situation. One of her neighbours was very helpful, introducing her to other neighbours, and her children began to make friends at school. She used to do ironing at home to earn some extra money.

'It was difficult then because my children would have homework and I couldn't help them with it. I would often ask a friend to help if she had the time. It was frustrating for me, because I wanted to help them myself'.

In 1983 an old friend contacted her brother. She was looking for Serina. This was Cathy R., who had met and become good friends with Serina in L____ when she was researching the Indian/Pakistani community there for a thesis she was writing for Sydney University. When they met again, Cathy was very positive about Serina's wish to learn to read and write. 'She was sure I could learn and she said she would help me'.

'First of all she took me to the TAFE College here in G____. It wasn't very good, because I didn't even know my alphabet. I couldn't get started without learning the basics. Cathy started by giving me lessons in the C____ library. We started with children's ABC books. Cathy then found me a private tutor who volunteered to help me. It was very hard, and at one stage I wanted to give it all up, but my heart said 'keep trying''.

'My mother died, so Dad came to live with me. We got along very well. He helped me with the children. Dad was almost blind when he moved from L____ to our place at G____'. By then Serina thought she had enough basic knowledge to start an adult literacy course at C____ TAFE. 'My friend Cathy came to the interview with me because I was very scared and I wanted to learn so much'.

When she entered the course Serina travelled to C____ twice a week on a bus trip that took an hour each way. Her classes were held from 9 am to 3 pm. 'In 1992 I did level 1, Life and Work Strategies. After I did that I knew I would go on. It gave me a lot of confidence. Now I can read almost anything and I help my kids with their homework. My kids are proud of my reading and writing and I am proud too.' In 1993 Serina continued her studies at the TAFE College and was very pleased with her results.

By 1994 Serina had saved enough to buy a car so she could travel independently. With some help from her father, she was able to take out a mortgage on a small house in G____. Her children are very pleased for her, and she feels that all her effort has been rewarded. Her eldest son has started an apprenticeship as a motor mechanic, her older daughter has started training as a hairdresser and her two younger children are both doing well at school.

Serina enjoys going to TAFE classes, where she has made some good friends. 'Some of us started together at the same time and we're still going. We help each other and other people who were scared and shy like us when we first started. I am doing Computer Studies now. I like learning new things and doing new subjects now'. Overall, Serina feels very comfortable with her language skills and she now has the ambition to learn as much as she can while she can.

When she reflects on her life in Australia, she comments that she is sorry the nearest mosque is too far away for her to visit but that her family all get together and enjoy special religious times. Her two sisters have returned to live in Pakistan and now she writes to them, but she has no desire to return there. She is very happy in Australia. 'Maybe I'll visit my sisters one day. I have a job in an Indian restaurant in C____. I work there part time and really enjoy it. It reminds me of my old home, but I'm glad I don't live there now'.

Serina's life is full and rewarding. She enjoys gardening, sewing, visiting family and friends, going to TAFE classes and going to work. She is a very gentle and quietly spoken person whose determination to succeed has grown throughout the period covered by the study. Her confidence and ambitions too have grown. She is involved in local organisations, such as Neighbourhood Watch, and is quite confident that her opinions will be heard and respected when she makes a contribution.

Harry

After attending literacy classes for about two years Harry had progressed to a level where, with his teacher's help, he was able to write his own story. The story was edited via interviews with teachers, family members and peers from the class and from the community in which he lives and nothing has had to be changed.

Harry wrote this story for the study over a period of months, and at the same time, applied for several positions. He was not successful in seeking employment in his local community, but has begun to seek enrolment in a community counsellor program to formalise the volunteer work he has been undertaking as part of his adult education work placement program. His story illustrates his involvement in social activities, his community involvement and hopefully the impact on employment. It certainly illustrates the impact of his education and the intervention that was as much physiological as it was educational.

> I really don't remember much about my schooling except those of us who seemed to be slower were always grouped together. Mainly for English, Maths and Social Studies. We were told this would help us learn a bit more easily. It didn't.

I have vague memories of sitting at the back of a classroom looking at all the other kids reading, and learning. I sat staring at a book, not having any idea what it said or what I was meant to do with it. The teachers never seemed to have the interest, nor the time, to deal with me. They stopped giving me books. Instead I was given pencils and paper and told to colour in. Throughout my childhood I had a number of assessments both psychological and physical. It seemed that no-one had an answer to my problems. It was said that I was either stupid or lazy.

After attending a number of different schools, my mother decided to withdraw me from formal education during my grade three year. I was nine years old. I could neither read nor write. I went on to do correspondence schooling at home with only a small amount of success. I learned to read well enough to recognise street signs and selected other words. I went back to secondary school but with little success.

Some teachers, in the secondary school seemed to take very little interest in my problem with learning and were quite surprised, when at the end of first form, they found I had been attending extra classes on Saturday morning. One even said he would have given me extra marks on my final exam if he had known about this. Some students in my classes really did not want to learn but most did. Those of us who did wish to learn something were treated the same way as the others. Thinking back, I believe that probably half of my third form would have suffered similar problems to me. I say this because I remember a sense of frustration in some classes. Using the teacher's comments in my report book I can see that some teachers may have been as frustrated as I was.

The comments here are from both my mid-year and end of year exams in order, from first form [year 7].

> *An extremely good boy, Harry, has worked hard.*
> *Mathematics are weak, as basic number facts are not well known.*
> *Conduct: Very Good English 39 21 Students /14.*
> *Harry has tried to improve and has done so. 19 Students /13.*
> *He is well mannered and courteous. Maths have improved.*
> *Conduct: Very Good English, 40.*
> *Harry is a well mannered lad. He tries hard but is a slow worker. Conduct: Very Good; English 63 19 Students /17.*
> *Harry is working hard in class. (Promoted to form 3 [written as an after-thought].*
> *Conduct: Very Good English 42 20 Students /19.*
> *Harry is a pleasant boy who is courteous on all occasions. It is felt that greater application in some subjects would improve his results. Conduct: Very Good English E.*
> *Harry has shown improvement in some subjects this half year due to greater application. It is good to see he has the ability to act on the advice given at the midyear. He has continued to be well behaved and courteous at all times. Harry should repeat form three at the normal level.*
> *Conduct: Very Good. English 52.*

In general the work of each year was in three levels-accelerated, normal, or lower. This began in 1965. The words Conduct: Very Good grate on my nerves every time I hear or read them, because they remind me so much of my school days and the effort I put in for so little return. Conduct: Very Good! In the last year at school, I spent Saturday mornings at English and Maths classes, organised by some teachers from other schools and only one from mine. This teacher did not seem too keen for other teachers to know about his extra work. I now think this was because he might have been ridiculed by them for his efforts. For what he did for me, I thank him.

When I left school I started work in a small supermarket. Because I had to keep stock on the shelves, I quickly learned to recognise products by the label design, rather than the writing on them. This idea also worked in the storeroom along with the old saying a place for everything and everything in its place.

After about a year I left the supermarket and went through a series of jobs. These included drainage labourer, roof tiler, factory hand in various industries and other types of work where reading and

writing were not a requirement. Because of my lack of literacy skills I have had many problems with jobs I have held which include: not being able to do some training courses; not being able to take a promotion because of the paperwork required and having to leave a job because of changes to the work involved.

All of the work was repetitious and quite boring, which made it quite easy to get by with limited reading and writing skills. In about 1969 I started work in a cabinet-making factory. It was here I had to start reading plans and drawings. This was very difficult, until I was able to go out and measure jobs on site with the boss. Some of the other work was pre cut and just had to be assembled. After four or five years, and two or three companies, I left cabinet-making and started work in the fibre glass industry working on boats, 'ute' [pickup truck] canopies and types of playground equipment. Again this work required little more than common sense. It is easy to hide problems like mine in these types of jobs.

When I was eighteen, a time when most young men are eager to get a driver's licence, I kept putting off the task. The reason for this was [that] I simply could not read the road rules book. I had bought a car soon after my eighteenth birthday. I finally went for my licence when I was almost nineteen. This was because there was talk of a written test being introduced. I believed I would have a better chance of success with an oral test. With the help of family and friends, I learned the questions and answers by having them read to me repeatedly, a boring but effective process. It took about three months and I passed first time. Although I did pass first time up, I really did not know the road rules properly because I didn't understand the meaning behind them. I was just saying the words as they were told to me by other people.

During February 1993 I decided to start a re-education program so I went to ask about an English course I had seen advertised in a book which had been sent to all houses in the district. While I was being interviewed I was asked to read a pamphlet so the teacher could gauge my level of comprehension. When I looked at the sheet, I paused and she asked what was wrong. I said I would read it as soon as the words stopped moving about the page. She asked what I meant and I said it was like thousands of ants scurrying around a nest. When I said that, she banged on the table and walked across the room. Then she asked if I was dyslexic. I said I didn't know. She then asked if I had heard of or knew anything about dyslexia. I said I had heard something about it on television, but didn't really know much about it. She asked if I would do a test to find out if I had this problem. I agreed. We then decided to look through the checklist for scotopic sensitivity syndrome which she had in the desk drawer.

The first test was a checklist to see if I did come into the danger area. It was multiple choice, and the answers were to be 'always', 'sometimes' 'never'. Most of my answers were 'always', a few 'sometimes' and only three or four, 'nevers'. After talking about the results for a while, it was decided that I should have more tests. During these tests coloured plastic sheets were placed over pages of text. Some of these made it easier for me to read. Others had the opposite effect. While we were using the pale yellow and gold coloured sheets, I found the difference remarkable. I could actually read what I was looking at.

Being diagnosed as dyslexic and getting my lenses was only the first step. I now have to deal with all the problems of learning, starting from the beginning (a prep student at 30!). I have a huge mental and emotional block to overcome because of so many years of having to hide my problem and avoid situations that most people take for granted and still having to cope with life as an adult.

I really did not believe that a piece of coloured plastic could make any difference to the way I saw a page of writing. It does! After three or four more tests, at a clinic in Melbourne, we found that a yellow tint was the best for me. I find the yellow tinted glasses are an enormous help when reading because I can see more words at a time. This makes it easier to understand what I am reading. The letters and words stay in focus and I can see the punctuation marks now. They used to look like dirty spots on the page before. Also, when using a computer, I find the coloured lenses of great benefit because the flickering of the monitor is stilled quite dramatic. As a result of this, I do not suffer the headaches that I used to get. My eyes don't feel as tired or sore when using the glasses with the computer. I know this because I have tried working without them and feel quite sick when I finish. I get both a bad headache and nausea.

When I am driving on misty or heavily overcast days, I find the glasses are a great help as they make things more visible. People, livestock, other vehicles and signs can be more easily seen and so the coloured lenses make driving more enjoyable.

Harry continues his story responding to specific questions he was asked.

Do the lenses make a difference?

I am writing this which I couldn't have done before I got my lenses! I also have greater depth perception and increased confidence. They take away the uncomfortable glare from computer screens and increase the time that I can focus on print. Now I can sit and read for long enough to actually learn and achieve something. Before using coloured lenses, I could work for only a few minutes before needing to take a break from either reading, writing or computer work. Now I can work for hours at a time.

Have literacy difficulties embarrassed you?

There have been many embarrassing moments in my life that most literate people would never have to face. For instance I have stood in line at the RTA (VicRoads) office and had the person at the desk ask me to fill out a form with the instructions, 'just write 'make', 'model', and 'colour' of the car here'. I have had to make an excuse to go back outside to get someone else to fill out the form or copy the details I have needed off the car.

Likewise, at a bank, when someone has asked me to fill out a withdrawal form, I have broken out in a sweat because I couldn't fill it out. The teller has looked at me as if I have been trying to rip the bank off. (Thank god for pin numbers and A.T.M. machines. I am one of the lucky ones who can read well enough to use an A.T.M. machine!).

How have you compensated for the problem in the past?

Reading, before I got my lenses, was frustrating and very difficult. It would take me so long to read a page because I kept losing the line I was trying to read. By the time I got to the end of the page, I had no comprehension of what I had read. I would either use a ruler, a piece of paper or my finger to keep my place. I needed to put so much effort into keeping track of words and whole lines of words that I had little left to give to understanding what I was reading.

I suppose for many years I have simply not read, unless I have absolutely had to. When I started reading newspapers I would only read the headlines and sometimes a few lines, or two or three paragraphs. Then I would make up my own story, to go with the little bit I had read. This meant I could not afford to get into any discussions with other people, so I became a listener rather than a talker. After listening to others points of view, I would tend to agree with whoever had the strongest voice. These people seemed to have most people agreeing with them. These 'in depth' discussions were invariably held in the bar of the local hotel or football club and would be forgotten by the next morning. Other information would come from television or radio, therefore I would not have to read. I would just listen. By doing this I found lots of words I did not know which made understanding quite hard. At other times it was impossible to know what a word meant because I was too embarrassed to look in the dictionary while other people were in the room.

Sometime around 1979 or 1980 I decided to learn to spell a bit better, so I might understand more of what I heard. Someone suggested the crossword puzzles in the daily papers. You get the answers in tomorrow's paper, they would assure me. This helped me learn a lot of new words and what they meant, because it gave me an excuse to read the dictionary.

Does it matter whether someone is dyslexic or not in your adult classes?

It is my opinion that any person who has any influence on people's learning should give as much time as possible to students to allow them to learn at their own pace. I do understand the need to

keep to a schedule within our education system. However, when someone is found to be slower, they should be encouraged, not forced to keep up with the others. I would rather see a student repeat first and/or second form and be taught how to learn earlier instead of having to muddle through in higher forms or having to leave school early. It is again 'my' opinion that people with learning problems do give themselves away, early. They do this by being either unsettling to the rest of the class, or by being too quiet in the hope of not being noticed. I think I fitted into the latter group.

As most reading and writing problems are likely to show up in the first two years of secondary school I would like to see exercises of writing on the blackboard, and reading aloud in the standard English program. By choice this could be done in private the first and/or second time, but in a full class environment after that. I think that once those with problems found that they are not alone, they would feel more at ease with themselves. They would then find it much easier to concentrate on learning.

What are your hopes for the future?

My first hope now is to capture the education which escaped me as a child and teenager. I have started with an Adult General Education Course and will continue this with any courses that are made open to me. I also would like to work toward higher education but this will depend a lot on the results of what I am doing now. This is because I still have confidence in myself and my abilities. Only by everyone taking more interest will we be able to better educate our youth. Only through better educated people, will we have a more competitive country.

I am now forty two years old. With the help of people like my tutors, I now have a basic grasp of reading and writing skills. There are also others who have given me so much support and I want to say thank you to them all. I now feel I can make something of the rest of my life. If what I have written in these pages helps just one person then it's all been worthwhile.

And all I can say is it is very difficult to say what I am going to do in the future. At the moment all I can say is I want to learn, and try to overcome some small prejudices in the community towards people who have literacy problems. People ask me, 'Why the funny glasses?' Or they say, 'Its all in your imagination'. Well if it is just imagination then I, and a lot of other people in the world must have great imaginations!

Michael

Michael thinks things have turned out pretty well so far. In 1992, when he was first interviewed for the study, he was not sure that they would. In conversation he is quietly spoken; although he seems happy to share his experiences with a researcher he only speaks to once or twice a year, he is reticent by nature.

Michael took a literacy class in a local community centre on the recommendation of a workmate. The trigger for him had been a trip to Transport House, his employers' headquarters, as he set out to get a 'crane chaser's certificate'. 'I couldn't spell the stuff I had to write', he explains. 'It was so embarrassing that I decided I had to do something about it'.

Michael, born in 1944, grew up in Gippsland in various communities. His parents' marriage ended in divorce and the family moved about; by the time he started at a one-teacher, rural school his older brother and sister were already there. His brother had warned him of what happened when 'kids got things wrong', and his recollection is that he got the strap on his first day. His early memories of school are not happy. He mentions, almost in passing, that he was 'picked on' and that he was involved in fights and scraps.

He remembers one teacher with some fondness because 'he tried to do something for me'. But when the family moved to a large provincial town, Michael says, he got lost in the large school. 'I was having problems and I knew it, but the teacher couldn't help. There were too many kids there'.

At fifteen, Michael was offered work at a motel in the district. Cleaning, mowing and carting briquettes were his tasks. He stayed there for a couple of years and then went to work on a dairy stud farm - even now he smiles as he recalls the farm: I loved it', he says. At eighteen, he left to come to the city. 'I found it hard to make friends. It's different in a country town - everyone knows you'. His brother was working at ICI and suggested that Containers Ltd were hiring workers, so Michael went there 'until something better turned up'. He stayed for twenty seven years.

In conversation, Michael watches his interlocutor closely; as he explains, the twenty seven years 'on the floor' left him with industrial deafness. He left that job to join the railways in their workshops, thus going from a labouring position to a semi-skilled, non-trades position as an iron machinist 2; it is clear that he thinks this was a good move. Since he joined the community literacy and numeracy class he has moved from the workshop floor to the store, where he is responsible for putting together packs of spare parts for reconditioning electric train motors. He explains his duties carefully, so that his listener understands the steps he takes as motors are assessed, then crated with the spare parts and sent off for assembly.

He has gained a forklift truck driver's licence, and sees this as more evidence of how things have improved.

Outside work Michael is a committed, competitive long distance runner. He says that even as a kid he loved running, and when someone he knew suggested a club he could join he was happy to join others who shared his interests; he might have joined earlier if he had known about such clubs. His interest and involvement in running has led to some otherwise unexpected results: at the age of fifty two Michael has recently married Cathy, a fellow club member, though he points out (to his wife's amusement) that since they run over different distances they aren't really competing with each other.

When he speaks of his community-based course, Michael points out that it helped him tremendously. In his view, the most valuable thing he learned was 'how to do sums'. He says his reading isn't bad now; he reads the newspaper each day. His kitchen has a notice board by the phone with memos about club running and social events pinned to it. He admits that his spelling is still a bit of a problem; he says, 'I know in my head what I want to write, but when I get to a word I don't know I end up with something else'. He says that he is less embarrassed about his spelling now. He keeps a list of problem words with him at work so that he can refer to it when he needs to.

When Michael's range of strategies in solving literacy problems are compared with those of others in the study over the five years it seems at first glance that he has become less resourceful, but in fact at the beginning of the study he already had a repertoire of strategies, and he still does. His job is making increased demands on him, as stock control is now done by computer and Michael says he finds using it very difficult. 'The first time I ever saw a computer was when I got to the store. It's hard to remember the codes'. He is convinced that his job is making increased demands on his literacy abilities: '...at Containers I could hide, but here I have to write stuff, and use the computer'.

Michael started his adult literacy course with a specific end in mind: he wanted to pass the test that would allow him to get a 'crane chaser's' licence. He is pleased that he learnt more than that, but he doesn't see himself starting new courses. His life is already pretty busy with work, his running and his home.

Julie

Julie lives at H____, a relatively new, low-cost housing suburb on the far western edge of Melbourne. She has lived there since 1987. Her rented duplex is neatly furnished and shows evidence of careful housekeeping. During the course of the study she has undergone some major transitions in her life: she has separated from her husband, moved out of the workforce as a result of industrial injuries and been involved in a continuing dispute with WorkCare, the industrial insurance agency.

It is over ten years since she first attended literacy classes where she formerly lived. She has since transferred to the community centre and attends maths and literacy classes for two hours a day, four days a week; she intends to continue classes for as along as she keeps learning. In her own view her progress has been mammoth. She has kept her workbooks and papers from the courses and shares them with the researchers with some sense of pride in her accomplishment.

Julie grew up and attended primary school in an inner industrial suburb. Her schooling was a struggle; she recalls repeating Grade 1 twice. Secondary schooling was not any easier. Her explanation is that 'Things wouldn't sink in, I couldn't understand things. I was left behind. I felt like I couldn't learn nothing'. She remembers that she had difficulty understanding and comprehending content from an early age. She said that her mother employed a tutor for her during her secondary schooling, and adds that her brother had also struggled with schooling and has difficulty with literacy.

Until 1995 Julie worked as a kitchen hand, however, heavy lifting of pots and pans damaged her elbow and, later, her shoulder. She has not worked since. She survives on a single mother's pension, which is due to convert to an unemployment benefit when her youngest son, whom she supports, turns sixteen.

Julie stumbled on adult literacy classes by accident over ten years ago when she had to drive her sister to L____ because she was unable to drive herself. While she was there she was introduced to the literacy program and encouraged to attend.

Her literacy classes offer her a positive environment, where her teacher is supportive. She knows that she only has to ask for help and it will be given, that she has someone to talk to and share her problems with, and that she can get advice or direction without feeling judged or inadequate. Her membership of a hydrotherapy group and a singles club also offer her supportive, social outlets. She is still frightened about the prospect of work and has convinced herself that she cannot complete application forms or prepare a 'resume' without help.

Her recollection of her initial literacy classes is of receiving one-to-one tuition; this was followed with small group settings of five or six participants. She says, 'we were feeding off one another in the group and we got on well'.

Classes now consist of preparing a diary of the weekend or week's activities. The teacher corrects spelling and grammar and then Julie rewrites her work, sometimes finding errors her teacher hasn't picked up the first time. She comments that 'some days it just doesn't sink in'. 'She finds spelling hard at times. 'I know the word but I go blank, so I write what I think and the teacher corrects it and I rewrite it'. Julie says she can often tell a word is wrong just by looking at it. Her teacher tells her not to worry about her spelling, that she is here to help. Sometimes class members read from a book to each other, which Julie believes improves her reading.

It is clear that for Julie being a member of a literacy class serves purposes beyond those of learning to read and write. She says, 'I didn't like meeting people at first, but now you can't shut me up'. She understands now what she reads in TV Week or Woman's Day: 'I read the lot.' She studies catalogues and junk mail to find specials, then makes up a shopping list. She says that she enjoys reading now compared to what she used to. 'There is a core group of five to six who have attended classes for some time now. Others have come in and gone. The group has attended excursions to the planetarium and soon will go to the zoo, where they will choose an animal to be described in an essay. She misses classes when school holiday breaks come round; the camaraderie and contact with others in the same position as herself gives her self esteem and encouragement. 'At first I didn't think I would be able to do it. I was dependent on my husband all the time. I got confident in English and maths. Now I go and help people with problems.' She says it is worth going now, especially when she is doing exams as completion of these gives her confidence and clarifies her progress.

Julie believes she still has difficulty with the past tense, but to the observer her 'difficulty ' seems to be not so much a reading or writing problem as it is a reflection of her oral dialect. The samples of her writing shared with the researchers show a diary-like recount of her daily activities.

She says that previously she was a timid woman, afraid to speak up for herself, dependent on her husband to communicate with the outside world for her and believing that her ability to read, write, spell and do mathematics was inadequate. This belief was reinforced by her ex-husband, who told her 'You're dumb, you're stupid. What could you do? You need me to do everything for you'.

Five years ago when Julie commenced participation in a case study, she could only scan magazines, although she could follow a street directory; she watched a lot of television. But, follow up interviews each

year revealed that her confidence in herself was improving. Her battle with WorkCare over her injuries, in her own words, 'toughened me up', and her separation from her husband three years ago released her from dependency on him. She has had to learn to stand up for herself and stand on her own two feet.

All the informants in the remaining case studies became part of the project when they, with co-workers in a manufacturing company in suburban S____ in Melbourne, undertook a workplace literacy program, (WELL group).

Zora

Zora was born in Macedonia but has lived in Australia for twenty-five years. She left school in Macedonia at the age of fifteen and worked on the family farm prior to her marriage at the age of eighteen. Her husband is a qualified primary teacher and her daughter has completed a higher education diploma in accounting.

Zora is very articulate and confident in her use of oral English. She began learning English in conversation with other workers at her first job in a local fish cannery where many European migrants with limited English worked, but her first formal instruction was in the literacy program at the company where she was working when the study began. She claims that she had never been taught the grammatical structure of English prior to the literacy program. She has been a machinist with the same company for six years and now needs to use both literacy and numeracy skills as part of the company's quality management policy that requires her to complete a form and chart documenting machine tension twice during each shift.

Zora came to the literacy classes with the goal of improving her English, particularly her spelling and grammar. She considers these as the gap or weakness in her literacy. She had high expectations both of the literacy classes and of herself; she was determined to be able to write shopping lists and telephone messages free from any spelling mistakes. Her determination to achieve this was evident from the serious manner with which she applied herself in class and by the careful presentation of her work. It would seem that this determination is one of her character traits, as her supervisor and other workers also spoke about her striving to produce only the best on the job.

Zora is the most articulate member of her work group and participated very willingly, saying she sees value in the research and believes that it may help future training in the workplace. She expresses her ideas confidently and was always prepared to contribute or speak out in class or while being interviewed. It would appear that prior to the literacy program, she had no major difficulties with daily literacy requirements, either at work or at home; the obvious question, then, was what motivated her to attend the classes, whether her expectations were met or not and whether they remained consistent or changed during the project.

Zora's education could be described as typical of the time and circumstances in which she grew up. As a child, her family did not have high expectations for her academically, believing that her role as a female, was to become a wife and raise children. When discussing her educational ambitions and the progress she made at school, Zora shrugs and says, 'I married young'. When asked about the details of her educational history she says, 'I didn't have much education I just had the main years of schooling'.

Despite what she sees as a limited education, she claims to be literate in her own language. She does not recall having any literacy problems when she was growing up, although she claims that her language is much easier than English, because 'The way you say it is exactly as you write it'.

Zora claims that most of her literacy activities are related to her job; basic day-to-day activities including shopping and paying bills. She also spends a considerable amount of time reading the Bible and other religious material as she is a practising Jehovah's Witness and prepares speeches for her congregation and for conversations with people when she makes personal visits to their homes. She scans the newspaper, claiming to read 'just the pictures and a few words': she prefers to read magazines, or writings connected with her religious beliefs. This explanation of her reading habit remained constant throughout the study.

She feels that she is quite independent with her literacy, although she sometimes seeks help when writing notes and letters and her husband often 'corrects' notes she leaves for him regarding housework and other tasks of living. However, she is confident enough to try. If she has difficulty with reading or writing, she

'asks someone' or 'uses a dictionary'. Any scepticism that this is a conventional answer to satisfy teachers or researchers is diminished as she produces an obviously well-used pocket dictionary from her handbag. Her concern for correctness was often further demonstrated when she would ask the literacy teacher to check if she had used the correct or most appropriate word in written work.

When first asked why she wanted to attend the classes, her initial answer was that she felt that her writing and spelling were poor, so the classes would help. Several months later her response to the same enquiry was 'To improve my skills in English. It is important for work'. This second response remained consistent across the entire period of the study during all interviews.

Zora says education is 'very important' and believes her family thinks the same. 'Yeah, they said that it was a very good idea because my husband was always encouraging me to learn the language, especially with the understanding. It wasn't that bad for me, but my reading and writing was very poor and so always he was encouraging me to learn more at this point and he was really good about it'.

When asked what she thought learning to be literate would do for her she said, 'Well, literacy to me means that I should be much better skilled in reading, writing and understanding people'. Zora's notion of literacy as incorporating all areas of communication rather than simply the ability to read and write indicates a thoughtful appreciation of the role it might play in her life. Of her initial expectations of the class: 'I know I'm too far from knowing the language especially spelling and writing, but if I continue, if these classes continue, I know that my English is going to improve a lot'.

The expectations of a positive outcome continued and when asked at the conclusion of the program what she thought she had learnt, she said, 'I will be much [more] better equipped to read better, and to better communicate with other workers', and 'We are helped to be better communicators with our fellow workers, supervisors and managers'. Her expectations seem to have been realised, as her response was affirmative when the researcher asked, 'Do you feel better or worse now that the classes are over, or the same'? 'I feel better, more confident about my writing, my reading and communication'.

Zora's declaration of 'feeling better' and 'more confident' are consistent with other data collected at different stages of the literacy program by an independent researcher. In phase 2, she admitted to 'feeling better about myself'; however, in terms of confidence she believed that her opinions didn't 'count for much', and was undecided about how much she knew and understood in comparison with others. By the third phase, she had changed her assessment of the value of her opinions - this was confirmed by her willingness to contribute in work group meetings. Her other responses to formal data collection interviews in the later phases of the study suggested that she had become more confident about herself across a range of social and work settings.

In reflecting on her experiences as an adult learner, Zora admitted to being nervous about her first formal educational program since leaving school in Macedonia; her nervousness was to do with how she felt she would react to the classes. When the classes did begin she approached them with great determination, and despite her seriousness she showed every indication of enjoying the experience. She came to class smiling and eager to talk with the other class members. She commented several times that she found the workplace classes to be convenient and a comfortable atmosphere in which to learn, but despite this had no immediate plans to do further study, and for fairly practical reasons. When asked how far she thought she would be able to go in education, she replied 'I am restricted because of work. I will keep doing work based classes'. Later in the study, in response to a similar question, the answer was 'You never know, but I'm not planning'.

Despite her conscientious attitude and the clear goals she set for herself, Zora seems surprised that her literacy skills have actually improved. At the conclusion of the program she made this comment: 'my writing really improved and I was pleased I write in English, and it was a big shock and many times I talk with my husband'.

Zora is a confident speaker and is able to articulate and express her ideas. It would seem that the literacy classes matched her expectations and were consistent with those of the company. In her own words, 'As much as these classes are helping us in spelling, reading and writing, we are helped to be better communicators with our fellow workers, supervisors and managers. This will make us more efficient at our work'.

Vesna

Born in Serbia in 1954, Vesna recalled that she grew up like most people around her. She left school when she was sixteen years of age to help her mother raise the younger children and attend to the day-to-day chores. It was during this time that she learnt to sew.

Her first impressions of Australia are vivid. 'I arrived in Australia on the 27th of December 1973. I was nineteen years old and married, with a nine-month-old baby. My brother came to the airport to take us to his home in Y____. Even though the area was reasonably old, my first impression was 'I like it!' It was so different from my country - the houses, streets, trees. The weather was beautiful and we used to go to the beach every day'.

When her son was old enough to be looked after by someone else, Vesna decided to get work so that she and her husband could save enough money to buy their own home. She first started to learn the language 'on the job', as a packer in a chocolate factory. She remembered that she was not alone in not speaking English - everyone there spoke different languages, and had different accents when they did speak English. During this time she became pregnant with her second child, but continued to work until late in the pregnancy. For several years after that she concentrated on raising her children, but 'picked up' more English from watching television and from her husband. At her next job, as a kitchen hand in a big and busy restaurant kitchen, the cooks would only speak in English, so in order to understand, she tried to learn as much as she could. Now, like the other workers, her duties are mixed. She 'heads' her team and has been selected to be a possible supervisor.

When first interviewed, Vesna appeared to be reticent and was reluctant to reveal personal details. However, in the course of the literacy program and the research she seemed to become more confident in discussing her thoughts about her perceptions of the program. She was quite clear about her reason for doing the course. It was 'to learn how to spell English', and when questioned about what she thought she would be learning: 'Oh, I think [first what like all] the spelling I enjoy mainly because I can speak basic English but I couldn't spell nothing before'. Throughout the study, she remained consistent in her view that what she thought she needed was spelling, that she was competent in oracy and wanted to do the classes so that she could improve her written skills.

The workplace literacy program was Vesna's first experience of a formal education as an adult. She regretted not taking classes sooner: 'I feel sorry that I didn't start learning when I come to Australia straight away'. In an earlier interview, conducted at the conclusion of the first ten-week 'trial' program in 1992, she indicated that prior to the classes at work, 'I never had time.'

Vesna described her first day at the classes as 'interesting' and when asked if she felt nervous, said she wasn't. Concurrently with the literacy classes she attended the company's numeracy classes, trialled in 1992 with one of the management trainers. (These classes did not continue in 1993 and 1994). Vesna was selected to do the company's supervisor's course in 1994, but withdrew as she did not feel able to meet all the requirements. 'I stopped because I didn't feel comfortable I feel I didn't know enough English'. When asked whether she thought her English was not good enough, she agreed: 'Yeah, especially spelling'.

The researcher asked whether she felt similarly uncomfortable in the literacy classes. 'No because here they all don't know how to speak'.

Vesna indicated on two separate occasions that the classes had helped her personally and believed that they had helped with the level of communication between fellow workers.

The classes helped me: like, the other day a friend of mine asked me instructions for if he wants to buy something; he said 'Can you write that for me'? and I did, which was good. Before I was saying, 'No, I don't know how to spell', but this time I said 'Yeah, all right, I'll do it for you'. So it was good. Yeah, it helped me because before I never even tried to spell anything, but when a friend asks us to buy something and he said to write it down, so I did.

When asked whether she had spoken to anyone else in the class who had mentioned feeling better about speaking English, she replied: 'Yeah, I think they all agree that they're all improving or speaking or they learn a few new words..., we talk more, we got more communications'.

Bich

Bich is a 35 year old Vietnamese-born woman. She completed a high school education in Vietnam and planned to do further studies, but, had to stay at home to help raise the family and take care of her grandparents. She learnt some basic English conversation and numbers at school in Vietnam, where some of the texts were in English. She is fluent in Mandarin, Cantonese and Vietnamese and speaks a little French. When she was twenty eight she came to Australia as a refugee with her father, who speaks no English, because of the war. She received private lessons in English for approximately three hours a week for six months after she arrived. She was employed as a machinist in a factory, but, like others there, works in a team or a small group and does a range of jobs. Before the completion of this study Bich gave birth to her first child, a daughter; after this, she was employed on a casual basis. She has good written skills and is not afraid to voice her ideas. She has lived in the same home, which is close to her work, since her arrival in Australia six years ago.

Bich's characteristic smile reveals her pleasant and engaging personality. She is a petite and attractive young woman, who is eager to learn as much as she can. Her perceptions of her literacy skills are lower than her actual ability. When asked to rate her reading, writing and spoken English, she replied, 'Not very well'; however, she believes that she understands spoken English 'reasonably well'. She tends to get a little excited when answering a question, which causes her to increase the speed of her speech; as a result, some of her ideas and syntax become somewhat jumbled.

Bich is one of the key informants in this study as she contributed to each of the data sources and said she thought her contribution was important not only for academic purposes, but also because she wanted to help develop education for workers. She values education, believing that it is 'very important' for all areas of life and 'can increase job opportunities'. She thinks that her poor skills in reading and writing English have 'stopped her from getting a job and getting ahead'. She also considers it more important to read and speak and write fluently in English than in any other language. Her initial reasons for doing the classes, were to 'improve my English, especially speaking, and I sometimes find the words used by managers difficult'. She expected that to attend classes would help her with her job, and this is indicated by her reasons for doing the classes both 'for myself, and for my job'.

Bich enjoys learning and would like to continue with education. However, she finds it difficult, as she feels that her education now 'has to be part of work, as I need to work to live'. Since the completion of the study it has become even more difficult, as she has her baby daughter to raise on her own. Lack of time also restricts her ability to spend time reading, although she enjoys 'looking through the newspaper and magazines', during work breaks. In the later part of the study, she reported that she spent more time 'looking at the job section of the newspaper'.

She claims to be able to independently perform 'most' daily literacy activities, including shopping and paying bills, but sometimes needs help to 'fill in forms or legal documents'. If she is unsure about the meaning of a text, she asks 'someone who knows'.

Originally, she was not confident enough to take part in meetings and discussions at work, although, during the first phase of the data collection she was a member of the Health and Safety Committee. When she was asked how she felt about the significance of her opinions, she suggested 'my opinions don't count for very much'. However, several months later she was more confident that her opinions at work were valued, and by phase 3 she was quite certain that her opinions were 'important at work'.

At the end of the study Bich said she felt better about herself. When asked what she thought she had gained from the classes she replied, 'Yeah, I feel lot changed. The first thing I have to say is I can read and I can write what I want and if I don't understand something I can ask teacher what I want to know. She can explain to me clear and because I'm in a different country with a different language for me I think I have to learn more and make it easy in the future'.

It appears that Bich had several ambitions regarding a career prior to her arrival in Australia. 'Before when I was in my country I wanted to plan to work in, open like a child care and I have been wanted to become the journalist, but this not that chance. I know about five languages. This is a very good chance for me but it is not easy because I'm getting old'. Despite not having realised these career opportunities, she is still optimistic that one day she may be able to do another job but, even though she has a relative who can look after her daughter it is difficult to find permanent work, and she needs to work to pay her bills. Despite her pleasant personality and apparently happy nature, Bich admitted on two separate occasions that she often felt lonely or isolated. She appears to have an extremely limited social life. Her focus seems to be on finding a permanent job once again and bringing up her little girl.

Iris

Iris has worked for the company for twenty years. She is fifty three years old, married, and has a grown-up son. Her husband is unable to work owing to illness, so she has been the breadwinner for some time. Iris was born in Italy, but has limited literacy skills in Italian as she left school at the age of eleven. Her family were very poor and lived in the rural provinces of northern Italy. She was required to help her mother, who taught her to sew, and to take care of the cleaning and cooking. Her marriage, at sixteen, was arranged by her father and together with her husband she migrated to Australia in 1960, when she was nineteen. She remembered hearing English for the first time on the ship. She was excited about coming to Australia as she had heard that it was a very good place to live, with lots of opportunities.

Her husband found work almost immediately and they lived in a house with two other families. Iris stayed at home to take care of the other families' children and to cook and clean, and during this time she gave birth to her first child, a son. Some time later she and her husband moved to rent the house they now own. Iris's second child was a daughter and as soon as she felt that she could leave her children to be taken care of she went to look for work so that they would be able to buy their house.

Iris has spent the greater part of her working life in manual, semi-skilled jobs. She has minimal written skills in English, but high oracy skills. She is happy to work with someone else making the big decisions.

Her first job in Australia was the one she held with the company until mid-1994. She was first employed as a machinist, but like other factory workers became multi-skilled, having a variety of tasks and working in a small group or team until, like many others, she was made redundant.

By that time she had worked for the company for longer than any of the other participants. Her job had become very important to her and appeared to be an integral aspect of her life, providing her with a strong social network.

When she first started work she could not speak much English, and relied on her other Italian friends to help her. She remembers taking home application forms for her husband to fill in. She was able to write her name, address and telephone number, but said it had taken her years to get it right. The literacy classes were her first formal instruction as an adult, and she appears from the beginning to have been eager to learn for learning's sake. She recalled her initial response when she heard about the classes: 'In factory somebody said something about school, if you want to go to school, somebody ask me you want to go to school. I say yes why not? We learn something, you know'. When asked how she felt about the classes, she replied, 'After first, first time when I start, I feel little bit shy, can't speak, but after I feel better I start to understand spelling'. She had the support of her family in taking the classes: 'It's very happy my family too I do this.'

Iris's view of herself as shy was confirmed by observation in the workplace. Apart from chatting with her close friend Bich, she appeared uneasy in large group discussions. Her reluctance to contribute to discussion had some significance in a workplace rapidly adopting quality management processes that required oral and written communication skills.

For Iris, the primary reason for taking the classes was to improve her spoken English. She appeared to enjoy them, and believed that both she and the company benefited from them. 'Yeah, when you do these classes you got more chance to know you understand better this thing, you know?'

With some assistance from her son, she wrote,' My name is Iris ____. I have worked here now for twenty years starting in 1973 when the company was named _____. So many people have come and gone, but one thing I have found is that everybody is so friendly. I hope to work here for a long time. It's just like my second home'.

For some time after being made redundant – at which she was extremely upset - she found it difficult to find work. However, she successfully gained casual employment pressing clothing for a retail outlet. She said she was thankful to have work but claimed that it was not the same as her old job and that she missed her friends very much.

Much of this data came from unrecorded conversations with the researcher, who chose to make notes after their meetings as Iris seemed to freeze if a tape recorder was used. It was through many such conversations that she became more animated. She tended to seek out the researcher to discuss her ideas and feelings informally.

Jacinta

Jacinta is married, with three children. She is forty-two years old and was born in Sri Lanka. She has lived in Australia for seven years, but first learnt English in Sri Lanka, where she completed secondary school and undertook secretarial studies at a tertiary college. Her first job was as a bookkeeper for her father's business; she did this in between the birth of her children. When her husband accepted an engineering position in Australia, he came here to find a home for them; she and the children followed some six months later. When she found out about her husband's new job in Australia, she bought some books and tried to teach herself English. She was excited at the thought of Australia, as she had memories of its size and shape from geography lessons at school. When she first arrived in Australia, she lived with her family in a migrant hostel in Adelaide; she attended English classes at the local TAFE College on a full-time basis for six months. Her husband was transferred to Melbourne and it was then that she decided to work full time so that they could save enough money to send their children to university. After a few months of temporary work at the clothing factory, she applied for a permanent position with the company. She has worked there full time ever since.

Jacinta had several temporary positions as an industrial machinist prior to being employed as a machinist with the company. After two years she was promoted to product development in which reading and writing were a part of her job. She enrolled in literacy classes at a TAFE College one night a week to help with her speech and writing in English, believing that it is important to continue to keep learning and improve her literacy skills. Jacinta is a little different from the other informants in that she now has a position in the office, rather than in production or the factory

Jacinta claimed to be literate in Singhalese, but rarely spoke the language at home; English was her preferred language. She considered that her English literacy skills were reasonable and her response to being asked how well she understood, spoke, read and wrote English was 'reasonably well'. However, as she considered it 'very important' for her job to have good literacy skills, she was keen to improve them, especially her spelling and grammar; she felt that lack of sufficient skills had in the past prevented her from getting a job and getting ahead. If she needed help with anything concerning literacy, she was prepared to ask someone who she thought would know. She claimed that she did not read the paper much - only sometimes, such as on the train to work – but she preferred to read books, saying that she 'always has at least one book' with her.

Unlike the other informants, Jacinta was computer-literate, using a computer every day at work. (There is also a computer at home that is used by the whole family). She claimed to be confident with literacy and often used both a dictionary and the spell checker on the computer to check her accuracy. She also liked to help her children with their homework, and together they read the set novels. Her son is completing his final

year of secondary education and her elder daughter is in Year 10; her younger daughter has just started secondary school.

Jacinta values education. She believes it is important in all walks of life. She believes that education 'makes you mature, develops your mind so that you can live life to the best', and that her friends and family share this perception. She is a confident person, taking an active role in meetings and discussions at work, and also appeared to have an active social life, playing netball for a local team in her community every week. She enjoyed this very much and believed that it was important to keep fit. She was also on the union committee and took minutes for the meetings regarding the literacy classes. However, on the three occasions that she was asked about the significance of her opinions she did not consider them important. Jacinta felt that the classes have helped her with her literacy and she felt better since attending the classes.

Lucia

Lucia is fifty-four, a shy and quietly spoken woman. She was born in Italy and came to live in Australia when she was eighteen. Her husband is Italian also, and together they have lived and worked in S____ for the past twenty-five years. Lucia is literate in Italian, despite having left school at the age of thirteen to help her parents, whom she described as peasants – who worked on the land. Lucia initially learned the craft of dressmaking from her mother, and this has been her employment since arriving in Australia. She has been employed with the company for more than fifteen years and claims to have seen many changes there. Apart from some private tutoring from her son, the literacy program was her first formal instruction in English. She believes that her first day at work was her first attempt at the language.

Having lived in Australia since the age of eighteen, Lucia considers herself to be well and truly Australian. She is proud of her Italian origins and lives a European lifestyle in terms of the food she eats and the clothes she wears, but she feels 'at home' in Australia and enjoys her family life. Prior to the completion of the study she was retrenched. She was very upset about this, as not only was her job her financial security, it was also her social outlet, as she described her colleagues as being more than friends, and like family. She is concerned that her age and limited literacy skills will prevent her from getting another job, and all her previous jobs had been as a machinist. Nevertheless, she appeared contented with her life despite the sadness of having to leave a job in which she was happy; although shy, once she gets to know people she is more relaxed and contributes more to the conversation. She considers her English literacy to be very poor and is not confident to take part in company meetings. Asked her initial reasons for doing the classes, her answer was 'to improve myself and help my kids'. Her response to the same question several months later was that the classes were 'a great opportunity, because they were work-based'.

Lucia believes education is 'very important' and that her family and friends share this view. She believes that having a good education means your life has greater opportunities and, like many migrants of her generation, she wanted to ensure that her son had the best education possible. As previously stated, Lucia had a limited education. However, she did a professional dressmaking course in Italy, prior to coming to Australia. The literacy classes were her first educational experience as an adult. She felt 'comfortable' in this learning environment, although this was not the case when she first started: 'Oh, it was terrible the first time because I can't read, just a little bit and I can't speak very well. I can't spell nothing, so its very, very terrible it was for me because we look, we think we same as children'.

Lucia was aware that she was not completely independent with her literacy, but she was quite prepared to 'ask someone who would know' if she had problems, such as with spelling, or reading a word she did not understand. She claimed to require assistance with 'filling out forms, reading written information from government agencies or business, and writing notes and letters'. Despite requiring this occasional assistance, she did not feel restricted with day-to-day tasks as she was able to do her daily household chores, such as shopping and paying bills, easily. She does not spend a great deal of time reading and claimed to read, 'just the pictures and a few words' when looking at the daily newspaper. She likes to look at gardening magazines, and often reads an Italian newspaper.

Lucia has no major career ambitions, but likes to keep busy and to be with people. After her retrenchment she was employed on a temporary, casual basis by the company and enjoyed the opportunity to work again. She had 'no luck' with other jobs. When she was required to apply literacy skills beyond that needed in her

home environment, she felt restricted by her limitations in literacy. She knew that she would have to 'fill in a form' with all of her details, including her age. This was quite different from the way she originally got the job from the company, which was simply, 'asking if there was any work' and then 'taking the forms home to my son to fill in'. However, she does not believe that her level of reading and writing has previously prevented her from getting a job or getting ahead.

In choosing from a range of statements concerning reasons for taking the classes, Lucia responded that she did this both 'for herself' and 'for her job'. Of the two options regarding specific questions about her expectations, her response was positive: 'to improve your English': she did not agree to the possible response of 'to keep your job'. She believed that the classes were beneficial for both the company and the workers.

When questioned about the benefits of literacy programs for employers, she replied, 'I think the company they are very happy because we are improve, especially now they change many things, and many of us don't understand before because they change many jobs and I think they are very happy to learn to understand what we are doing'. She appears to have enjoyed the classes and claimed to have developed her literacy skills: 'Yeah, slow, slow, yes. I think I go there'.

Quyen

Quyen was born in China, but grew up in Vietnam. He is now fifty-one and is fluent in Cantonese, Mandarin and Vietnamese; he also speaks Ken Dong and 'a little' French, although he cannot read or write it. He and his wife came to Australia as refugees; he had left Vietnam to escape the war, and then spent several years in Canada. He had wanted to learn English before leaving Vietnam and attempted to teach himself with some primary English texts he had bought, but his only opportunity to study them was after his day's work as a typesetter. On his first arrival at a refugee camp in Canada he did an intensive English course: it ran for six hours a day, four days a week for nine months; he had to speak English at his first job as a wood turner in Canada. When he arrived in Australia in 1988 he was employed as a web-cutter for the company. This has been his only job in this country, but now he does 'many different jobs', as the company has changed the way things are done. He now works in a team, where his tasks are varied. Quyen is a polite gentleman, who likes to speak English whenever he can – although this tends to be mainly at work, as his wife speaks little English. Quyen would like to do more study, as he enjoys learning. He is a keen gardener, who appears to enjoy his own company rather than big groups.

He has a youthful appearance and a keen attitude to work; he has lived close to his workplace since his arrival.

Quyen's own assessment of his English literacy skills was very low. 'Not very well', he says when asked about how he speaks and writes English. At times he was difficult to understand; the researcher observed that this occurred when he spoke or read aloud in a group. He claimed to be frustrated by his inability to 'practise' his English except at work and during classes, but he has a clear goal, which is to 'improve my English'. Despite his interest in gardening, and perhaps in engineering, he appeared to have no real plans for further study apart from continuing literacy classes. 'I would like to have more classes and have more class to learn English'.

Quyen had left school at sixteen to start his work as a typesetter, which he considered to be a 'good job'. He believed education to be 'very important' and thought that his family and friends shared in this view; he also thought it was more important to be fluent and able to read and write English well rather than another language. He considered himself to be fairly independent with his literacy, but claimed that he sometimes needed help with 'reading written information from government agencies, or business - especially voting information, unless it was written in Chinese or Vietnamese. Writing notes and letters and filling out forms also gave him difficulty, but he was confident in using a dictionary if he needed to. He enjoyed reading the newspaper, especially the two local ones delivered each week; he reads them to find out about his community. He claimed to read the daily newspaper during any breaks at work, and reads the advertisements to 'practise saying words'. He did not feel confident to take part in meetings and discussions at work.

Quyen was not a member of any committees or social/recreational clubs during the project. He did not think his opinions on things counted. This comment did not change throughout the term of the project. Despite not regarding his opinions highly, Quyen believed that the classes helped him a great deal and indicated that he 'felt better about himself', since taking them: 'Yeah, that help me feel better at work. We can talk to some more experience working and everything with the supervisor and we know a bit more for the writing and put the some notes and some of the reports and they can help, they can help me at home too'.

Quyen believed that the company also benefited from the literacy program: 'Yeah, I think that its good for the company and good for the worker because when the worker know more English they know more what the report or every notice on the board, that should be better than the people when they don't know what the company talk to about the worker'.

Rose

There is limited data for Rose, as she left the company prior to the completion of both the literacy program and the research. During the second session of the program the house she and her husband were building on a new housing estate was completed, and as the travel time to work increased to approximately one hour each way she chose to withdraw from the classes in order to be home in time to meet her daughter, who attends the local primary school. However, she was subsequently interviewed on two occasions and she appeared happy to discuss her level of literacy.

Rose was born in India. She is thirty-two years old and has lived in Australia for eight years. At the commencement of the study, the family lived in a flat close to her work, but moved as soon as their new home was built. She first started to learn English at school, where it was a compulsory subject, although only in basic conversation; now, as her husband is Australian, she speaks only English at home. She elected to attend the classes so that she could improve her literacy skills and increase her vocabulary; they represented her first formal instruction since leaving school at the age of sixteen. She had several jobs as a machinist - both in India and in Australia - prior to being employed by the company, having learnt how to sew at an early age by watching her mother. She had been with the company for several years – first as a machinist and subsequently with a variety of pre- and post production duties - and did not consider her employment to be secure, although as she and her husband were building a new home in another area she was not overly concerned about losing her job; she would try to get a job in a nearby factory when they moved. Also, as she is only thirty-two years old, she plans to have at least one more child.

She indicated that the classes have helped her both at work and at home, especially in helping her daughter with homework. She feels that she can manage most of the literacy demands that she faces, so that it appears the classes have met her expectations, which were to improve and develop her existing skills: 'Uh, about learning more English and proper English and we learn a lot about that'. Rose appeared to be happy in her roles as mother and wife. Her interests are cooking, gardening and watching the television serials, 'E Street' and 'Neighbours'. She had no major career ambitions and did not plan on doing any further studies apart from classes connected with sewing, which she believed would help her both at work and at home.

Serim

Serim was born in Turkey and first came to Australia at the age of sixteen years. She claims to be actively literate in Turkish, reading newspapers and letters from her relatives; however, she believes that her writing skills are not as strong. Her husband, also Turkish, handles most of the daily household literacy activities, which include the banking and general correspondence.

Serim has three children. Her elder daughter has finished secondary school and is doing a TAFE course in office administration. Her son is in Year 10 at secondary school; he has plans to go to university at the completion of his studies. The younger girl is in her final year of primary school.

Serim has a high level of English oracy. Her spoken language is not marked by a strong accent, but - as indicated in the transcribed comments below - occasional phrases indicate that it is not her first language; she is confident with speech and reading, but lacks confidence in written English. She first learnt English conversation informally in her first job after arriving in Australia. The literacy classes were her first experience of education as an adult. She had been a machinist for the company for seven years and claimed to have minimal written tasks as part of her daily duties.

Serim wears a scarf covering her hair at all times in recognition of her religious and cultural beliefs as a Muslim. In the context of the workplace, the scarf distinguishes her from the other female workers, who seem to take great pride in their hair styles and often discuss their visits to the hairdresser. However, Serim does not seem out of place or unusual in the local area which as part of its multi-cultural nature has a strong Muslim community.

Serim left school at eleven years of age to help on the family land and to help her mother raise her younger sisters and brothers. She has never done a lot of writing in either Turkish or English; she claimed to have had no real need to do so, even at school. She believes that she has a reasonable understanding of English when spoken, and that she can speak English very well. Her perceptions of her skills in reading and writing in English are 'not very well' and 'not at all well'. She considers it 'very important' to talk fluently and write in English, whereas she considers it only 'somewhat important' to talk and write in another language.

Serim considers herself to be quite active with literacy as she reads a newspaper 'every day' for about 15 minutes. As previously mentioned, she reads Turkish magazines and newspapers, depending on how much time she has available; however, she does not buy them herself, but looks through them when her husband brings them home. She likes to read cookbooks and spends time helping her daughter with homework; this includes reading a Grade 4 text. If a note or a letter is required regarding excursions or absence from school for the younger children, she asks her elder daughter to do the writing, then she adds her signature.

When asked why she wanted to do the literacy course at work her response was 'To learn more English'. This expectation remained unchanged in phase 2 of the study, when she responded 'To improve my English'. Even at the end of the study she was still referring to her workplace literacy program as an English class. She said that not all workers saw the program the same way. 'They think we are silly, and I've heard a couple of girls talking about that we don't know nothing about and we go to school to learn anything but I don't care what they say I just want to learn even one word is good enough for me'. Serim believes that education is very important; apart from assisting with communication, education makes you 'feel better, feel something.'

When she first attended classes, she sat very quietly and made little comment. She preferred to work on her own and did not like doing group work. However, as the classes progressed she became more animated, and often led group discussions. She also seemed to be more social, often fully engaged in conversation with one of the students.

When talking about her participation in the classes, she commented, 'At first I get nervous, then I get happy. I am more open and talk more, I can talk to anybody and I can talk what I think. Before can't talk to anybody before I go to sch___ joined the class, but now I tell what I think in my mind. I'm not frightened I could say anything'.

Serim considered that reading English is important in her job, indicating that there are a lot of reading materials at work, which include signs, instructions and notices. She did not consider that writing in English was as important in her job; she claimed she was not required to do any. She regarded herself as independent and not in need of assistance to read manuals or instructions; however, she said that if she required help she would ask someone. She felt confident enough to take part in meetings, despite not being on any committees. Her perception of her own confidence is consistent with the researcher's initial observation of someone not afraid to speak her mind. Serim's perception of the importance of her opinions and knowledge in comparison with others changed during the period of the study: in phase 2 she was undecided, but by phase 3 she was assertively positive about the value of her own views - she considered her opinions to be important at work, at home and in the community. She also claimed to be more confident in speaking out in a group, and had gained respect from others since doing the classes.

Serim does not think of herself as being very 'social': the focus of her social activities are family or religious. Her family is not only aware, but also in full support, of her attending classes and learning more English; they considered it 'very important' that she have an education. 'My husband doing the same at his work. My kids, plus they happy too I'm learning something'.

When asked about her perception of the classes as they compared with her memories of school, she said, 'Well, it's not different. We used to learn alphabet of course. This is more serious because we learn safety about the work, but is more different but it is much better for me. I don't know the other girls'. This response is consistent with Serim's pragmatism. Many of her comments were about the course being 'useful', 'practical', 'like real life' and 'social'.

Serim appeared to have enjoyed the classes; she would come to them with a smile on her face. She changed from being quiet and shy to being confident and assertive in discussions and her increased involvement in social conversations during lunch and tea breaks indicated this. The classes appear to have met her initial expectations in terms of learning and of personal satisfaction; it would seem that it was for this reason, rather than for job security or for the company, that she attended them.

Luigi

Luigi was a hairdresser in Italy before migrating to Australia in 1965 at the age of eighteen; he had left school at the age of fifteen and worked in his father's barber shop. He worked for the company for more than fifteen years; he was an active union member and was on the workplace consultative committee. He took a redundancy package in June 1993 and now works for a local kitchen-cabinet manufacturer. Luigi was first employed at the company as a general process worker and has since been a forklift driver and a packing supervisor. He believes that the literacy demands have increased at work and that literacy classes are essential. He is a confident and garrulous person who taught himself English when he first arrived in Australia. He is married, with three children. He and his family are considered locals in their area, having lived in the same home for nearly twenty years.

Luigi was the final subject in the study, and despite some initial difficulty in tracking him following his redundancy, two of three major interviews were completed.

After migrating from Italy as a young man excited by the prospect of a chance of a new life, Luigi married at the age of twenty: his first job in Australia was as a hairdresser - he did this for several years. It was during this time that he also did a course in wig making at an advanced hairdressing academy for people who had lost their hair. He successfully completed the course, but found it difficult to read the texts and complete the written assignments. He had first learnt English on his arrival to Australia. As well as working full time, he worked in part-time jobs including driving taxis, cleaning and labouring. He did this so that he could save money to buy the family home. This he was able to do after five years and the original house that he purchased is their home today. He has two grown up daughters and one teenage son, all of whom still live at home.

Luigi believed that education was very important and that you are never too old to learn. His reasons for doing the literacy course were simply to 'read and write better'. When asked later in the study why he had started the classes, he responded, 'to improve myself, its good to keep learning'.

Luigi considered himself to be independent with his literacy; if he ever required help, he would simply ask someone. He appeared to enjoy conversation, and expressed his opinions on local and current events. He is an avid reader and likes to read the newspaper every day, even if not the entire paper, 'just stories that interest me and let me know what is going on around me', he feels that it is important to 'be an informed person'. He also considered that both reading and writing are an important part of his job. When he worked for the company he indicated that he was 'confident to take part in meetings and discussions'. He had been a union representative and appeared to have a detailed understanding of the company's structure. He believes that there have been many changes over the years that he has worked for the company. He likes the concept of multi-skilling as the job changed all the time and he was able to learn more.

Luigi, was unable to complete the workplace literacy program owing to his redundancy. He claimed that he felt better about himself after doing the classes and that the course met his expectations, which were to improve his English. At the final interview he said that he had been able to apply the things that he learnt in the literacy classes in real-life situations, especially map reading, as his job involved a lot of driving and delivery work. He was happy with his oracy, but indicated that he would like to improve his writing, as his job also required more writing. He planned to attend some evening classes close to his home, as his employer does not offer a literacy program. He believed that his life had changed dramatically since he was first interviewed and that in order to keep up with everything that is going on, it is necessary to keep learning.

Luigi leads an active social life outside of work. He likes to play soccer and golf and is a regular spectator at the local club soccer games. He goes to church on the occasions that he is expected to go, such as weddings, christenings and funerals. He likes to watch some television, but not too much, as he prefers to be active rather than sit around.

Summary of Case Study Outcomes

What reflections on the objectives of the project are provided by the case studies? Even here the results are varied. The first objective was to explore the economic and employment wellbeing of the cohort. Serina, who is arguably among the more successful of the informants, remains unemployed - as does Harry, another who views his participation as a success. Michael got his promotion; in fact, his experience - and his own perception of it - matches very closely that of the whole cohort as shown on the employment activity scale (Figure 4.10). Julie, who might also be seen as a success, is now unemployed. The employment history of the WELL group is also mixed.

Were personal goals met? That depends on whether there were such goals, and whether they were sustained over the five years. Mention has already been made of Michael's focus, and how that translated into a changed job and new challenges. Julie still seeks the security of her community classes. Bich found parenthood a more significant influence on her life than her classes. In general the case studies reflect the range of met and unmet expectations of the cohort.

Of the case study informants only Harry seems to be actively contemplating further education. Although Julie remains in a program, she does not speak in terms of further education as much as she does of the support the group provides. All informants spoke of the importance of education, but often as something likely to be of more value for their children than for themselves.

CHAPTER 10. CONCLUSIONS

After five years, the opportunity to stop and reflect on a project like this brings many things to mind. The project team swapped stories of cases they met, results that unfolded, other studies they had read and assumptions they had made that had changed during the course of the project.

An overriding sense of unease clouds the project outcomes. From the beginning it was assumed that what was to be studied was the effect of participation in an adult literacy program on the lives of clients. The underlying assumption of such a brief is that one thing will lead to another. Perhaps this is not so. It may be that the interaction of community, workplace and social contexts has been the educating factor. There is ample evidence in school-based education studies to show that the family and the social background are the most powerful determinants of learning. Is there an equivalent in adult education? The time lapse between commencement and destination outcomes of the study has been too great to draw direct conclusions.

In classical terms, the research suffers from many threats to validity. Each of these is dealt with below and then the chapter continues with a discussion of the results, taken in the context of the following discussion.

The study took a multiple observation approach. First there was an analysis of literature of longitudinal studies and other investigations that focussed on outcomes of adult literacy programs. These proved to be a good source of data on design and of items to use in surveys. Very few longitudinal studies had been undertaken. Jones (1987) had studied a cohort of students within an institution. Other studies in Tennessee (Merrifield, 1993; Merrifield, 1994) featured similar models used in this study. They were longitudinal studies that focused on the impact of the programs rather than measures of literacy gains per se. Outcomes of projects have been addressed by Brennan (1989) in seeking to identify outcomes. The latter study sought information from adult students and collected it via the instructors. The Merrifield study followed a cohort over three years as far as can be determined, and added a cohort each year. Each provided a source of items for the present study. Also rich in ideas and materials was the national literacy study (Wickert, 1989) and her derivation of the United States study (Kirsch, 1986). Each of these studies helped to form the project, as did Keeves (1979) and his model of environment and achievement. All these helped to form the structure and process of the study and to identify the initial data collection models.

Notwithstanding the resources available to the project, which were detailed in Chapter 2, the issue remained as to how to connect the results of 1995 surveys to classes held in 1992 and the intervening years. Events outside the life of the project would certainly influence the destinations of the students: their economic wellbeing and educational pathways; their social and community activities and predisposition all could be influenced by matters well beyond its control. The selection of the sample for study was influenced by some initial disquiet among providers that the project would be evaluative and that possible misuse of the data could occur. One representative of a particular national literacy organisation was especially nervous, and encouraged considerable numbers of possible providers not to participate. This meant that the approaches to the students were made through a volunteer sample of providers. In the initial data collection round, field interviewers were placed in classrooms if the providers agreed; they could only explain the project and request participation. Random samples of adults willing to make long-term commitment are impossible to obtain; therefore, errors of measurement in the report statistics are meaningless. Selection and sampling errors nevertheless weaken the possibility of drawing causal inferences and identifying the link between the outcomes and the participation rates.

The nature of this study made the subjects very aware of what was expected. The initial interview all but announced what was important. Sensitising the sample to the anticipated outcomes could in many studies be cause for concern. In a project lasting five years this is less likely, but cannot be dismissed altogether. In addition, the mere fact that the study focused on an extreme of a distribution of literacy, economic, community and social educational activity meant that over time some shift might occur, even by chance. This regression effect may also explain many of the changes observed.

The extensive data collection of the first year was not repeated. Subsets were monitored each year, keeping the data set to manageable limits, so the analyses are mainly two-year comparisons and others more or less than that.

In brief the main findings are as follows:

The participants had diverse expectations. Some were in the literacy programs for social reasons, some to learn to read, others to collect financial support linked to attendance, and others to seek enhanced employment opportunities. Literacy gains were but a small proportion of the motives for participation.

The participants developed noticeable shifts in reading and cognitive problem solving strategies. It appears that the majority of the participants learnt to read; the strategies reported are not approaches that participants develop intuitively, without direction from instructors. They needed to be taught to use the basic cueing systems of phonics, semantics and syntax, but whether these were gained as a result of participation cannot be resolved. The transition from dependence on tools and personal support was clear as they moved to the cueing systems and then to independence in literacy strategies. This is supported by an almost unanimous claim in eleven case studies that the literacy classes changed their lives.

The literacy classes did appear to affect the employment chances of participants. The take-up rate on the sample was more than twice as high as in other long term unemployed groups. A difference of 9% and 21% is too large to dismiss.
The access to employment was not uniform; inequities were identified among subsamples. Males attending classes had greater access than females, and once out of the workforce females had significantly lower chances of returning to it.

Self image and sociability measures produced some interesting findings. Initial measures of this construct were obtained in the classroom, but in later data gathering rounds many participants were no longer enrolled in a course. Differences in the sociability measures in and outside the classroom were identified. Hence, focus on sociability in classes using measures at the end of courses, collected by instructors, may be misleading in terms of effects of literacy courses. Sociability in literacy classes appeared to be learnt in the class and specific to it. Non participation in the courses seemed to affect a different type of sociability.

Pathways to further study were an immediate outcome for only a small proportion (17%) of the population. Many of the initial sample (30%) were still in literacy classes and the difference in reading strategies suggested that reading gains were not the main reason for their retention. Moreover, reading development was not restricted to those still in classes.

Social wellbeing and community activity indicators showed changes that illustrated increased participation and confidence over time. Use of libraries, community centres, social clubs and committee activities had increased, indicating a substantial change in the nature of the cohort's social and community activity.

The effect on employment and work activity was substantial. Changes in employment status were higher for participants than for potentially equivalent groups in the community. Promotion opportunities, a general increase in confidence and a more outgoing approach to life in the workplace seemed to be indicative of responses.

Functional and everyday literacy activities were substantially altered. Changes were reported in reading and writing, in numeracy activities and in problem solving strategies. There was no obvious relationship between the length of the course and the development of strategies. Programs that focus on basic skills without the transfer to a range of contexts may be linked to this.

Marital status does not seem to have been adversely affected by participation. The evidence in this study does not support any systematic change in marital status greater than could be expected among the general population, despite other studies that have reported the link, particularly for female students.

Recommendations

1. The teaching strategies of the practitioners in the classroom should be encouraged and further developed. The evidence that the reading strategies of the sample altered in the direction of 'learning to read' lends significant support to the profession and its practices. In spite of the reticence of the administrators, there is very good reason to examine the outcomes of adult literacy programs in terms of the gains made by clients. Research in school effectiveness is clear about the effect of the teacher. From a value added approach to evaluation it is possible to identify best practice in terms of client gains; then, from more qualitative analyses, it is possible to advance the best approach to instruction and to build this into professional development. Some evaluation in terms of literacy gains is well overdue, and should be implemented. The results in this study indicate that practitioners have little to be concerned about; in particular, it is important to identify the instructional strategies that maximise the gains identified.

2. While the effect of the classes led to reading strategy development, this can further be improved by identifying the successful practices and disseminating them through a professional development model based on best practice. Benchmarking in adult literacy classes should be introduced to capitalise on successful practices. Benchmarking should be established against best practice, as measured by value added indicators. The practices and their impact should be implemented and evaluated.

3. The emphasis on employment as an outcome of adult literacy programs is difficult to justify. While this study showed that access to employment was enhanced, too many steps in the process of developing literacy and gaining employment are broken, and outside the control of the provider. In the workplace itself, literacy programs are provided by employers for economic, safety and humanitarian reasons.

4. Training in oral communication in the workplace needs to take precedence over reading and text based literacy skills. For those who see literacy as oral, this poses no difficulty. Workplace literacy and language programs already focus on it, especially for workers whose preferred language is other than English. The same emphasis should be given to English preferred clients.

5. The adult education program singularly lacks data on the outcomes for individual participants. Reporting outcomes and follow up of programs seems to be a necessity, even if to establish the predictive validity of the assessments conducted and reported in the national reporting system; the system has not as yet influenced the provision, delivery mode, or language in the literacy levels, or the economic benefits of programs to industry. Some analysis of the national reporting data should be conducted to give policy makers evidence of effective practices. Follow up and reporting practices should provide a database that policymakers could use, at classroom, provider, program and systems levels.

6. The emphasis on self-esteem may be misplaced. Adult education teachers need reinforcement in areas of professional development leading to measurable outcomes.

7. Given the importance of the provider/program combination in explaining differences in the outcomes, it is important that more precise value added analyses be undertaken; those reported in this study were hampered by a lack of capacity to follow up. Real value could be identified in the characteristics of programs, procedures, curriculum and teachers, and other factors - such as time on task - could be identified. Where these can be linked to either positive or negative changes in participants, real recommendations can be made with the view to improving outcomes.

REFERENCES

Adams, R.J. and Khoo, S.T. (1993) QUEST: Total Item Analysis Package. Melbourne: ACER.

Beder, H. (1992). Adult Literacy: Issues for policy and practice. Malabar, FL: Kreiger.

Bossort, P. (1993) Longitudinal Study of Adult Literacy, Vancouver Personal Communication.

Brennan, B. Clark, R., and Dymock, D. (1989). Outcomes of adult literacy Programs, Armidale, University of New England, Department of Continuing Education.

Canada 2000 (1988) Literacy in Canada: A Research Report, Ottawa, Southern News Inc, Creative Research Group.

Corcoran, B., McKenna, A., McDonald, M., Griffin, P., Pitman, A., Wilson, E., Sharplin, E., & Hazel, S. (1996) REAL Provision. Literacy Networking at the CES/Provider/Employer Interface, DEETYA, Canberra

Corneille, K & Griffin, P (1994) Technical Manual, Assessment Research centre, RMIT, Coburg.

Darkenwald, G. and Valentine, T. (1984). Outcomes and impact of adult basic education. New Brunswick, NJ: Centre for Adult Development.

DEET (1991) Australia's Language: The Australian Language and Literacy Policy, Australian Government Printing Service, Canberra

DEET (June 1993) Generic Competencies Occasional Paper No 4, Higher Education Series, Canberra.

Fingeret, F. (1984) Social Network: A New Perspective on Independence and Illiterate Adults, Adult Education Quarterly 33,3, 133-146.

Freire, P. (1971) Pedagogy of the Oppressed. New York, Seaview.

Gee, J. (1990) Social Linguistics and Literacies: Ideology in discourses. Hampshire, Falmer Press.

Glaser, R. (1963). Instructional Technology and the measurement of learning outcomes: some questions. American Psychologist. 18, pp 519-21.

Glaser, R. (1981). The future of testing: a research agenda for cognitive psychology and psychopathics, American Psychologist, 36, (9), 9-23.

Griffin, P. & Smith, P., (1997) Changing the Focus. Teachers Introducing Profiles to Move Towards Outcomes Based Education, Australian Curriculum Studies Association, Canberra. (June 1997).

Griffin, P. & Smith, P. (1996) The Impact of Outcomes-Based Education on Teachers' Work, Melbourne, Assessment Research Centre, The University of Melbourne.

Griffin, P., (1995) Competency Assessment; Avoiding the Pitfalls of the Past. Australian and New Zealand Journal of Vocational Education. 3, 2, 33-59., December.

Griffin, P., & Santana, M. (1992) The Communication Training needs of English speaking background workers in the Building and Construction Industry in Victoria. A Project for the Victoria Building Industry Agreement Consultative Committee

Jones, S. (1991) Guide to literacy levels on the Survey of Literacy Skills used in Daily Activities, Unpublished paper, Statistics Canada, Ottawa.

Keeves, J.P. (1972) Educational Environment and Student Achievement, Stockholm, Almqvist and Wiksell.

Kelly, E.G. (1980) Evaluation as persuasion. Educational Evaluation and Policy Analysis.

Kirsch, I. and Jungeblut, A. (1986) Literacy: Profiles of America's Young Adults. Princeton, New Jersey: NAEP.

Long, P. (1989) Literacy for Productivity, Canberra, Department of Employment, Education and Training, Australian Government Publishing Service.

Luke, A. and Gilbert, P. (Editors) (1993). Literacy in Context, Australian Perspectives and Issues, St. Leonards: Allen and Unwin.

Merrifield, J., Norris, L. and White, L. (1992). "I'm not a quitter!": Job training and basic education for women textile workers. Centre for Literacy Studies. The university of Tennessee.

Merrifleid, J., Smith, M., Rea, K. and Shriver, T. (1993). Longitudinal Study of Adult Literacy Participants in Tennessee. Centre for Literacy Studies. The University of Tennessee.

Miltenyi, G. (1989) English in the Workplace: A Shrewd Economic Investment? Canberra. Office of Multi Cultural Affairs, Department of Prime Minister and Cabinets.

Nickse, R. S. (1990). Foreword in Family Literacy in Action: A survey of Successful Program. McIvor, M. (Ed.) Syracuse: N.Y.: New Readers Press.

OACFEB (1993) Adult Basic Education Accreditation Framework Project, Draft Competencies in Reading and Writing, Melbourne. Office of State Training Board.

Office of Training and Further Education (1995) Outcomes and pathways in adult and community education, Melbourne. Adult, Community and Further Education Division, Victoria.

Patton, M.Q., (1977) Qualitative Approaches to Evaluation. London, Sage Publications

Pollock, J. (1993) Progress Report on 5 Year Study of Adult Basic Education. Paper presented at the annual conference of the Australian Reading Association, Melbourne, July 1993.

Rabash, J. & Woodhouse, G. (1995) MLn Command Reference (Version 1.0) Multilevel Models Project, Institute of Education, University of London.

Rasch, G. (1960) Probabilistic Models for some Intelligence and Attainment Tests, Denmark Paedogogiske Institute, Copenhagen and University of Chicago Press.

Rasch, G. (1980) Probabilistic models of attainment and intelligence. Chicago. University of Chicago Press.

REARK (1995) Special Intervention Program (SIP) Evaluation. Project Report. Canberra: Department of Employment, Education and Training. Evaluation and Monitoring Branch.

Rosenberg, M. (1965). Society and the adolescent self image. Princeton, NJ. Princeton University Press.

Seppanen, L. (1991). Adult basic education in Washington Community Colleges: A follow-up study. Olympia, WA: Washington State Board for Community College Education.

Skinner, T.J. (1997) Aspects of Literacy: Profiles and Perceptions, Australia, 1996, Australian Bureau of Statistics

Smith, Frank. (1985) Reading Without Nonsense, 2nd Ed., Teacher's College Press.

Stein, S. (1995). Adult Learner Perspectives on Goal 6: Towards a Customer-Driven Vision for Adult Literacy and Life-Long Learning. Washington, DC: National Institute for Literacy.

Strauss A. (1987). Qualitative analysis for social scientists. Cambridge, MA.: Cambridge University Press.

Taylor Fitz-Gibbon, C. (1997) Feasibility studies for national system of value added indicators. Durham, University of Durham, Curriculum, Evaluation and Management Centre.

Thomas, A. (1990). The Reluctant Learner, Victoria, Province of British Columbia, Ministry of Education, Training and Technology.

Wickert, R. (1989) No Single Measure, Canberra, Department of Employment, Education and Training.

Willis, S. (Ed) (1990) Being numerate: What counts, Australian Council for Educational Research, Melbourne

Wolcott, H.F., (1988) Ethnographic research in education. In R.M. Jaeger (Ed), Complementary methods for research in education (pp. 187-210). Washington, DC; American Educational Research Association.

Wright, B. & Masters, G. (1982). Rating Scale Analysis. Chicago: MESA Press.